

WARPAINT SERIES No.23

Fairey GANNET

BY STEVE HAZELL

849 Squadron 'A' Flight Gannet AEW.3 XP224:263-H about to leave the Gannet holding pattern and recover on board *HMS Hermes* in Lyme Bay in July 1968 before a Far East deployment. The lowered hook was a visual signal to the ship that the aircraft had made its scheduled rendezvous (Charlie Time) and was ready to leave the holding pattern and land. At this time the flight did not apply its colours to the arrester hook, and as this particular aircraft had only recently joined 'A' Flight it still lacked the usual albatross finemblem which was eventually applied whilst the ship was on passage.







By Steve Hazell

DURING World War 2 Britain was again made all too aware of how vulnerable it was to submarine warfare, and how its very existence depended upon keeping the sealanes open. It took the Battle of the Atlantic to bring about an integrated air. surface and subsurface approach to anti-submarine warfare and by the end of the war the UK possessed a potent anti-submarine capability. However, with peace came the inevitable reduction in Britain's armed forces, and in the absence of any obvious threat the Royal Navy's antisubmarine forces did not escape their share of force reductions. Besides the cancellation of many aircraft contracts lower priorities were assigned to projects which, had the war continued, would have provided Britain's future combat aircraft. One such was a dedicated anti-submarine aircraft for the Fleet Air Arm.

Also with peace came the emergence of die USSR as a major power with global ambitions, and the dawning of the era of the Cold War put a check on western disarmament. The effectiveness of the German U-

The second prototype Gannet was VR557 shown here during the early 1950s In a two-seat configuration with the ventral radome below the jet-pipes, aft of the longer weapons bay. It carries a yellow prototype P' marking aft of the fuselage roundel which was common practice at that time. (APN)

boats had not been lost on the Soviets so when they set about constructing an ocean-going navy it was to include a large submarine force. It took several years before the true extent of the USSR's aspirations became apparent then in 1944 the North Atlantic Treaty Organization was established to safeguard the interests of the former western allies in the lace of increasing Soviet belligerence.

As one of the chief maritime powers within NATO the United Kingdom was tasked with providing a contribution towards the alliance's aircraft carrier and anti-submarine warfare forces, and although it still had sufficient ships for this it was very short of effective, modern aircraft

Gannet AS.4 (COD) XA466:777-LM on the Lossiemouth flight line in February 1977. By this time it was one of the few Headquarters Flight aircraft to have a nose code number, and the small squadron badge was again being marked on the tail sides. Note how it was necessary for indentations to be made in the weapons bay doors of the antisubmarine Gannets so that the main wheels could be raised or lowered with the doors open (author)

During the war the Meet Air Arm had generally used its torpedo-bomber and reconnaissance aircraft to attack submarines, relying upon either ships' ASDIC (later Sonar) information or on visual sightings to locate targets Late m the war the RN planned to acquire the Fancy Firefly as a dedicated antisubmarine aircraft, and the same company







Above: The Gannet T.2 prototype WN365 in the standard trainer finish of overall aluminium with yellow wing and fuselage trainer bands. Evident are the fixed instructor's periscope in front of the second canopy and the twin portholes to let more light into the rearmost cockpit. (MAP) Left: One of the training units to use the Gannet AS.1 was 796 Squadron at Culdrose, which used XA393:772-CU in 1958. The front spinner is red and the rear one black with a silver band between the two, and the squadron badge is marked below the cockpit front. A coloured pirate's head is marked on the upper auxiliary fin. (APN)

was also starting to produce the Spearfish torpedo-bomber which would have also had a limited anti-submarine role. Various technical problems with the latter type resulted in its cancellation soon after the war but the former did enter front line service as the Firefly AS.5, AS.6 and eventually the definitive three-seat AS.7.

The main troubles with the Firefly however, were that it was a wartime design with limited development potential, and had a single engine and limited payload. Because of payload considerations it was necessary for carrier-based anti-submarine aircraft either to work in pairs with one carrying the detection equipment and the other the offensive weapons, or else to act as a weapons carrier under the control of surface vessels. The Admiralty therefore viewed the Firefly as a short-term solution and set about formulating a specification for a more capable antisubmarine aircraft making the most of modern electronics and weapons, able both to locate and attack submarines.

In May 1964 Gannet AS.6 WN464:395 was in use with 831 Squadron at RAF Watton. This aircraft features the usual nose code and has the squadron badge below the cockpit side. Evident in this view are the additional decking whip aerials and the blade aerial below the forward fuselage. (APN)

COMPACT POWERPLANT

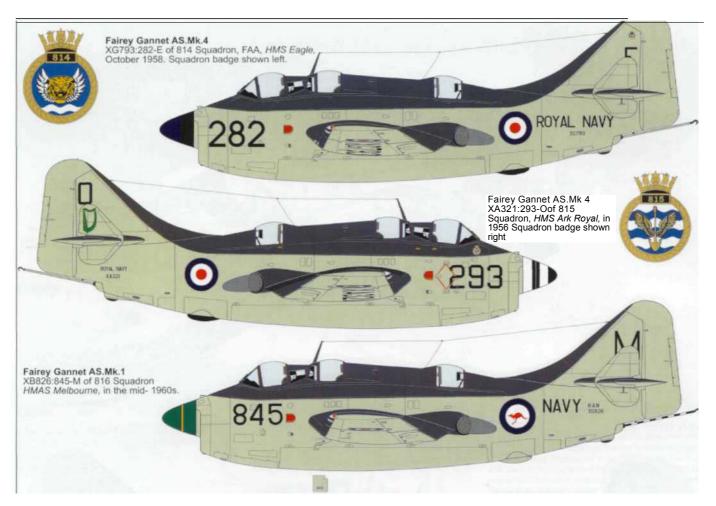
When the Admiralty's intentions became known it was natural that Fairey Aviation should take an interest since the company had much experience of producing naval aircraft and its Firefly was already in production for the RN. Up until then Fairey had produced single-engined aircraft for the service but now the company decided to design a twinengined aircraft with the advantages which

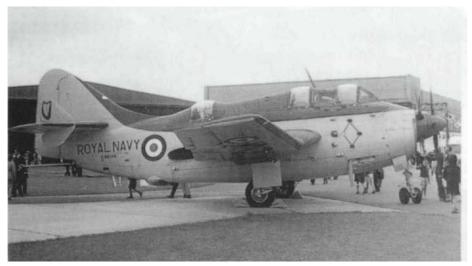
came from two engines yet with the weight and size of a single-engined type. In fact Fairey had already been addressing this problem for several years. A version of the Firefly had been proposed powered by two Rolls Royce Griffon piston engines mounted in tandem in the fuselage but this had failed to find favour partly because gas turbine engines were viewed as the power plants of the future. A second attempt was made with the Spearfish, a version of which was protposed to meet Specification 0.21/44 powered by two Rolls Royce Merlins. These were mounted in tandem within the fuselage



Fairey Gannet camouflage and markings

Drawings by David Howley FAIREY GANNET COLOUR KEY RAF Blue Grey BS 296C Ex Dk Sea Grey Fairey Gannet First prototype VR546 as delivered to White Waltham for flight trials from Fairey's Hayes factory, September 1949. Fairey Gannet AS.Mk.1 XA361:551-GN of 719 Squadron, FAA, RNAS Eglinton, Northern Ireland, 1957-58. ROYAL NAVY Fairey Gannet AS.Mk.1 XA322:771-CU of 796 Squadron, FAA. RNAS Culdrose in 1957. 796 Squadron's Pirate's head featured on Fairey Gannet AS.Mk. 4 XA414:236-C of 810 Squadron, FAA, HMS Centaur, in 1960. ROYAL NAVY 262 O Fairey Gannet AS.Mk.1 WN346:262-J of 812 Squadron, FAA, HMS Eagle, 1956.







This Gannet AS 1 formerly belonged to 815 Squadron Its nose code has been painted out but surprisingly it retains the squadron badge of a harp on the upper outer side of the finlets. Serialled XN346 it was in use by the Air Electrical School at Lee-on-Solent in 1962. (author)

each dining an independent co-axially mounted, contra-rotating propeller unit, but again the **engines** were piston and when the war ended **the** Spearfish programme was cancelled

Deciding upon an engine layout was one thing, but actually finding suitable power plants was a different matter altogether if the gas turbine really was to make the piston engine obsolete. As tar back as 1936 Fairey had worked on their own double engine unit suitable for carrier aircraft. The resulting P.24 Prince engine consisted of two vertically-opposed piston engines each with its own crankshaft which drove half of a co-axially mounted, contra-rotating, variable pitch propeller unit.

The engine was actually test flown in a Fairey Battle which proved the feasibility of the concept, but no wartime use was found for the engine. Nevertheless, the Prince demonstrated the feasibility of the double engine unit and during the war years Rolls Royce set about developing such an engine. The result was the Tweed double-propeller

825 Squadron Gannet AS.4 XA457347 fitted with underwing rockets on two-tier launching rails for the 1957 Culdrose air day. At the time the Gannet had an antisurface vessel role besides its antisubmarine primary task. The squadron badge is marked below the windscreen side and the checks on the upper auxiliary fins are red and white. (MAP)



gas turbine engine and it was this which was chosen as the power plant for Fairey's new naval project, known initially as the Fairey Type Q.

When Rolls Royce abandoned work on the Double Tweed Fairey rapidly had to find an alternative. Of the smaller turbine engines then under development the Armstrong Siddeley ASM.3 Mamba was already in limited production so Fairey proposed that two Mambas be coupled to form an engine unit in which each would drive an independent contra-rotating propeller through a common gearbox. Armstrong Siddeley agreed to this on the assurance that Fairey would adopt the new engine for the Type Q, and design work began in December 1945 based upon the 1,010 shp Mamba. The resulting 2,950 shp ASMD. 1 Double Mamba engine was ready to begin bench test runs in 1948, by which time work was well under way on two Type Q

prototypes to meet the most recent naval Specification GR. 17/45.

SPECIFICATION GR.17/45

As the General Reconnaissance type designator for Specification GR. 17/45 showed, by the end of the war the Admiralty had decided that the Fleet Air Arm now needed a dedicated anti-submarine warfare aircraft, but one which retained an anti-shipping strike capability. Accordingly this Specification called for a two-seat aircraft to operate from the fleet carriers of the day, which was capable of both detecting and attacking submerged submarines. It had to be radarequipped in order to detect submarine snorkels and periscopes breaking the surface in sea states when this would have been impossible for ships' radars or look-outs, and also to carry a range of weapons with

Gannet AS.1 XA321:293-O of 815 Squadron visiting Blackbushe in 1956. The squadron badge appears below the windscreen and the spinners are banded in black and white. The squadron's unofficial emblem of the Guiness harp was painted in green and yellow on the auxiliary fins.(APN)

which to attack the submarine once located. Both the radar and weaponry were also to give the aircraft a secondary anti-shipping reconnaissance and attack role.

At Fairey's Hayes factory the design team headed by H E Chaplin saw that technology had already rendered the Spearfish TB.I and Spec. O.21/44 obsolescent, but that work done on the twin-Merlin Spearfish could be applied to the GR. 17/45 project, the Type Q. Using a fuselage-mounted 'double' engine would have great advantages for a carrierborne aircraft. Apart from the added safety factor of two engines, by mounting both in the fuselage longer wings could be avoided and there were no asymmetric handling problems in the event of an engine failure. Additionally, the double-engine configuration with its normal aircraft handling under asymmetric engine conditions meant that it would be possible to cruise with one of the engines shut down, thereby extending aircraft endurance, improving fuel consumption and extending engine life. Contrarotating propellers would also make for safer approaches and overshoots by eliminating the effect of propeller torque normally experienced when the throttle was suddenly

In order to experiment with contra-rotat-

Two Gannet AS.1s of 812 Squadron, in the foreground is WN369:263-J, showing off their characteristics when on board *HMS Eagle* in 1956. This squadron did not have distinctive unit markings at the time the picture was taken, (via author)







One of the many Gannets used for ground instructional purposes was AS.1 WN346:A2493, shown here in use with the Air Electrical School, Lee-on-Solent during the 1960s. It was eventually passed on to the School of Aircraft Handling at Culdrose. (APN)

ing propellers Fairey modified the Griffon-powered Firefly 4 TW695 during 1947 to take a conventional contra-prop unit.

By 1946 the bascie layout of the Type (,) had been finalized and Fairey submitted the design to the Admiralty, alongside those from several other companies. Of the submissions two were selected for development, the Type Q and the Blackburn YA.5, although the latter was to develop through several stages before finally emerging as the YB.I. On 12 August 1946 a contract was placed with Fairey for two prototypes with the serial numbers VR546 and VR557, and later Blackburn was

WN405:555-GN was one of 719 Squadrons Gannet AS.1s during 1957. It had a red front spinner and a black rear one. and black and red checks on the upper auxiliary fins. The last two figures of the aircraft's code were repeated on the side of the lower auxiliary fins When photographed the aircraft was fitted with an engine change unit (ECU) from a Gannet T.2, hence the aluminium coloured nose front. (MAP)

also contracted to build three prototypes of its aircraft by way of insurance, of which the YB.I was considered the definitive version.

Considering then different origins the two contenders for GR. 17/45 were very similar in layout. Each had a deep fuselage with an internal weapons bay and a retractable ventral radar radome. low-set cranked wings which folded at two points, and tandem, forward-facing crew positions each below separate but interconnected sliding canopies.

Gannet AS.6 XA460:768-BY about to take off from Lossiemouth for its final flight to Hawarden on 11 February 1971. It carries the large 849 Squadron badge beneath the tail code which was usual at Brawdy but which was discontinued once the squadron moved to Lossiemouth. Little distinguished this unusual variant externally from the more common Gannet AS.4 other than the circular base mounting for a blade aerial below the extreme front end of the weapons bay doors, (author)

Both aircraft had a tricycle nose wheel undercarriage and both were powered by a Double Mamba turbo-prop engine driving contra-rotating propellers, although to be fair to Blackburn the YB. I was originally to have been powered by the Napier Naiad turbo-prop.

Both Fairey Type Q prototypes were built at the Haves factory and then dismantled and moved by road to Aldermaston airfield

flight trials. I he prototype VR546 undertook taxying trials at Aldermaston on 11 and 13 September I949 and made its first flight on 19 September piloted by fancy's duet test pilot R.G. Slade, followed by a second on 5 October. During the course of these, serious trim problems were experienced ay speeds



Right: 847 Squadron was formed specfically to patrol the waters around Cyprus during the pre-independence troubles. Here Gannet AS.1 XA335:086-HF is shown in storage at Abbotsinch after being withdrawn from service in 1958. Despite the Hal Far tail code the aircraft flew from RAF Nicosia and a black map of Cyprus appears on the upper auxiliary fin with the squadron number above it, probably in blue. The spinners also appear to be blue. Lower right: Another 847 Squadron aircraft was WN407:088-HF shown here also at Abbotsinch but wearing the final style of squadron markings which probably still featured the coloured spinners. The squadron also repeated the abbreviated aircraft code number in black on a white panel on the inboard wing leading edges. (MAP)

above 170 knots due to lack of adequate trim control and insufficient elevator force to counteract a tendency to pitch up with high engine power settings. Violent and sudden trim changes also occurred during deployment of the large Fairey-Youngman flaps which created turbulence and appreciably increased drag.

For its early flight trials VR546 lacked a ventral radome and was fitted with a tail parachute mounted in a pipe projecting from the rear fuselage in place of the arrester hook, presumably an anti-spin parachute to be deployed if the aircraft became uncontrollable during stability testing. Throughout these flights the Double Mamba generally performed well but there was a tendency for oil to be thrown back over the windscreen from the variable-pitch propeller hubs

Flight trials continued from Aldermaston until early November 1949 when the test flying was transferred to White Waltham where Fairey had an engineering facility permitting structural modifications to be made to the aircraft on site. Initial modifications carried out at White Waltham concentrated upon the inadequate elevator control force by altering the elevator hinge line and spring tabs, but on 25 November VR546 crashed on take off and was grounded for repairs and further modifications. The accident resulted from serious instability above rotation speed coupled with even worse elevator control than before, causing the aircraft to porpoise on liftoff and perform a series of heavy bounces along the runway. These eventually sheared off the nose undercarriage leg so that the aircraft slithered to a stop on bent propeller blades, over-stressing the engine in the process

By 1949 the Admiralty had revised its thinking on GR. 17/45 in the light of recent





technical developments. It had become apparent that the search radar would need its own dedicated operator and now with plans for the aircraft to carry sonobuoys as well, the increased work load would have been beyond the capabilities of a single person. Not only that, but the associated equipment could not have been fitted into one cockpit, so the Specification was amended to include a third crew member to operate the radar at least. By implication, the carriage of sonobuoys in addition to offensive weapons would also mean an enlarged weapons bay. These changes were considered to be so significantly important that a third Type Q prototype was ordered in June 1949 with the serial number WE488, to embody all new and the necessary modifications and to serve as the production prototype.

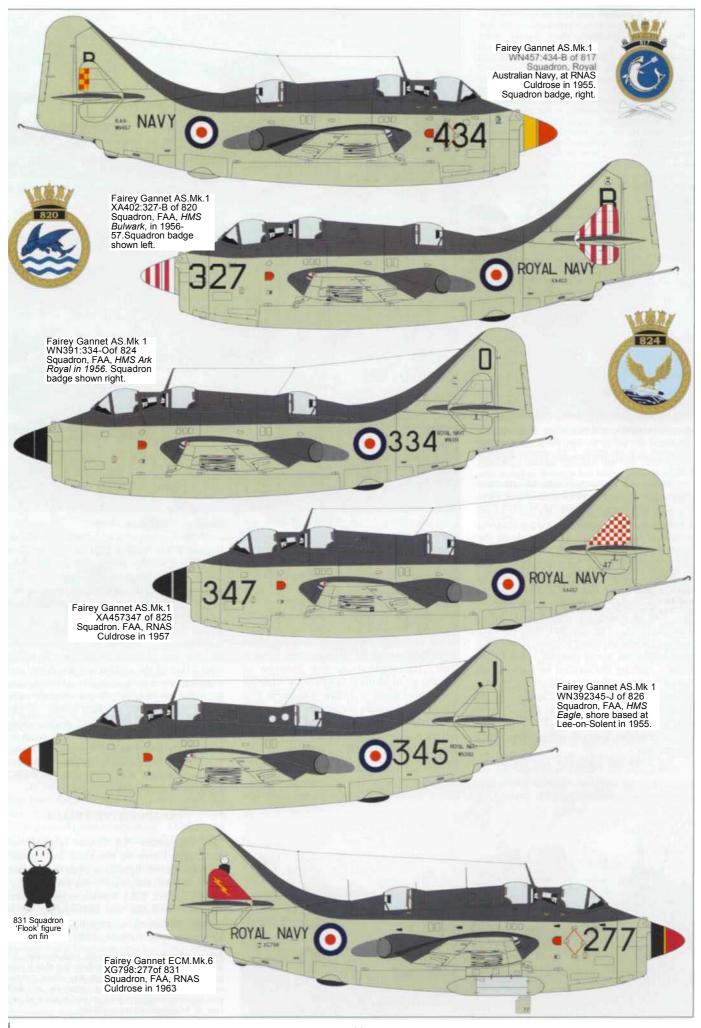
Following repairs and further modifications at White Waltham VR546 resumed test flying on 1 March 1950. By now both the aileron and rudder shape had been revised, together with their controls, but even so not all the adverse handling characteristics had been cured. It was probably during this period that the dummy ventral radar radome was installed. Further test flights showed that the feel of the ailerons was too heavy whilst that of the rudder was too light, and more serious was the inability of the pilot to hold the nosewheel off the runway once power was reduced at touch down. A further series of test flights and modifications followed until by May VR546 was ready to be delivered to A&AEE Boscombe Down for service evaluation to begin. In however, Fairey was lagging behind their Blackburn competitors.

COMPETITIVE TRIALS

The Blackburn YA.7 was already at Boscombe Down by this time, having carried out limited flight deck trials in February 1950, and was followed by the YA.8 in June. The definitive YB.I version lagged behind the other two but was nevertheless sufficiently advanced to appear at naval air shows during August 1950 and at the Farnborough display the following month.

For a time RAF Lossiemouth had Gannet T.5 XG882:8754M as a gate guardian. For this it was given a Sky and Extra Dark Sea Grey colour scheme together with a mixture of 849 Headquarters Flight markings and black and yellow 'B' Flight tail colours. (MAP)







Above: 849 Headquarters Flight Gannet T.5 XG888:770-BY in November 1969 As was not uncommon, it is fitted with an ex-Gannet AS 4 ECU resulting in the Sky band around the front fuselage. Unlike the anti-submarine versions of the Gannet, the trainers did not carry HF radio so lacked the long wire aerial array rigged to the tail fins. Neither did it carry the squadron badge on the fin.(author) Right: One of two Gannet T.2s used by the Empire Test Pilots School at RAE Farnborough was XA515:24. It had the standard finish of Aluminium with yellow trainer bands, and had a small RN-style fuselage serial number. The ETPS title was marked in black on the forward fuselage and the code number on the rear fuselage yellow band.

By 1950 there was also another contender tor Spec. G.17/45 on the scene in the shape of the Short SB 3, a version of the sturgeon powered by two Double Mamba engines and carrying a Chin mounted search radar. The SB 3 had the advantage over the Fairey and

Blackburn designs in that the Sturgeon was already in production for the





The 849 Headquarters Flight Gannet T.5 XG882:450-CU seen here in September 1964. The Aluminium and dayglo finish remained largely unchanged throughout the type's squadron service and the only significant change to the markings, apart from the codes, was the gradual reduction in size of the fuselage RN title and serial number. (APN)

Fleet Air Arm as a target-tug, but serious stability problems encountered during early flight trials caused the projeel to be abandoned and both prototypes were scrapped in 1951.

On 4 May 1950 VR546 Hew to Boscombe Down to begin service trials but as its starboard engine unit went unserviceable during the course of the day it returned to White Waltham for repair. Even this was put to good use however, as the aircraft took advantage

FAIREY GANNET SQUADRONS AND UNITS

ROYAL NAVY AND ROYAL AUSTRALIAN NAVY

700 SQUADRON Formed 18 August 1955 at RNAS Ford with various types, and operated the Gannet AS.1 until June 1961, the T.2 from March to May 1959 and the AS.4 from February 1957 to February 1960. To RNAS Yeovilton 19 September 1958 and disbanded 3 July 1961. 700G Flight at RNAS Culdrose used the Gannet AEW.3 from 17 August 1959 to 31 January 1960.

Gannet AS.1 WN353 '504-FD', WN355, WN376 '084-FD' then '521-FD', WN418 '520-FD', WN453 '083-FD' then 522-FD', WN426:500-FD. Gannet T.2 XG873.

Gannet AEW.3 XL452, XL453, XL454, XL455, XL456. Gannet AS.4 XA411 '522-FD' then '501-FD', XA412 '502-FD', XA413 '521-FD' then '503-FD', XA418 '50-VL¹, XG794 '503-FD', XG797 '505-VL', XG832 '505-VL¹. XG828:501-VL.

Based at RNAS Ford, and 703X Flight used the 703 SQUADRON Gannet AS.1 15 March 1954 to December 1954. Gannet AS. 1s remained with the squadron until it disbanded on 17 August 1955 Gannet AS.1 WN347, WN348, WN349, WN350, WN376:082-FD, WN453 '083-FD' WN344, WN364, WN373.

719 SQUADRON Began converting to Gannet AS.1s and T.2s at RNAS Figlinton in November 1955. Disbanded 17 March 1960. Gannet AS.1 WN364 '544-GN', WN398 '546-GN', WN405 '555-GN', WN461 '543-GN', XA323 '541-GN', XA346 '550-GN', XA347 '547-GN', XA352 '551-GN', XA357 '459-GN' then '545-GN', XA361 '555-GN' then '551-GN', XA363 '550-GN', XA364 '544-GN', XA368 '550-GN', XA408 '544-GN' then '552-GN' and '551-GN' WN352:531-GN, WN428:544:GN. Gannet XA510 '544-GN', XA511 '545-GN', XA522 '456-GN' then '542-GN', XG870:543-GN, XG871:544-GN, XG878:545-GN.

724 SQUADRON, RAN Formed 1 June 1955 at RANAS Nowra, NSW with various types including Gannet AS. 1s and T.2s. Gave up the Gannets in January 1958 but took over 725 Squadron's Gannet AS. 1s and T.2s on 1 June 1961 and continued to operate them until July 1964

and November 1966 respectively.
Gannet AS.1 WN456 '884-NW, XA326 '880-NW, XA327 '880-NW', XA329 '873-NW', XA330 '882-NW, XA350 '881-NW, XA389 '880-NW',

Gannet T.2 XA333 '877-NW', XA514 '878-NW', XA517 '876-NW', XG888

725 SQUADRON, RAN Formed 13 January 1958 at RANAS Nowra, NSW with various types including Gannet AS. 1s and T.2s. Disbanded 31

Gannet AS.1 XA327, XA329 '973-NW.

Gannet T.2 XA514 '854-NW'.

728 SQUADRON Based at Hal Far, Malta with a variety of types, and used the Gannet T.2 from July to November 1957. Gannet T.2 XA526.

737 SQUADRON Began to re-equip with Gannet AS. 1s and T.2s at RNAS Eglinton from March 1955. Disbanded 22 November 1957. Gannet AS.1 WN412 '431-GN', WN415 '618-GN¹, XA335 '620-GN'(or '626'), WN361:622-GN, WN447:434-GN then 620-GN. Gannet T.2 XA508 '421-GN' then '621-GN' and '627-GN', XA509 '626-GN', XA510 '423-GN', XA511 '624-GN', XA512 '625-GN', XA513 '626-GN', XA518 '622-GN', XA519 '623-GN', XA520 '627-GN', XG878 '622-GN' then 626-GN, XG871:623-GN, XG875:623-GN.

744 SQUADRON Began to re-equip with Gannet AS. 1s at RNAS Culdrose from May 1955. To RAF St Mawgan 23 October 1954 and disbanded 31 October 1956.

Gannet AS.1 WN393 '661-CU', WN421 '657-CU', WN462 '403-CU, XA324 '658-CU'.

796 SQUADRON Began to re-equip with Gannet T.2s at RNAS Culdrose from February 1957 and received Gannet AS. 1s from April 1957. Disbanded 1 October 1958.

Gannet AS.1 WN360 784', WN370 765', WN392 775-CU¹, WN425 767-CU¹, XA322 771-CU¹, XA324 762-CU¹, XA352 761-CIT, XA353 761-CU¹, XA358 764-CU¹ and 762-CU¹, XA387 777-CU¹, XA398 761-CU, XA399 780-CU¹, XA400 773-CU¹, XA405 776-CU¹, WN359:778-CU, WN368781-CU, WN463:763-CU. Gannet T.2 XA518 769-CU', XA523 769-CIT, XG876 770-CU'.

810 SQUADRON Formed 20 April 1959 at RNAS Culdrose with Gannet AS.4s for HMS Centaur. Disbanded 12 July 1960. Gannet AS.4 XA414:236-C, XA430 '231 -C, XA432 '233-C, XA465 '234-C, XA473 '235-C. XG797 '232-C.

812 SQUADRON Formed 7 November 1955 at RNAS Eglinton with Gannet AS.1s for HMS Eagle, and also used Gannet T.2s whilst disembarked. Disbanded 13 December 1956 at Lee-on-Solent. Gannet AS.1 WN346 '262-J', WN357 '445-J' then '265-J', WN400 '260J', XA339 '256-J', WN353:267-J, WN460:440-J then 261-J. Gannet T.2 XA520 '455-GN' then 255-GN', XA525, XA526.

Formed 14 January 1957 at RNAS Culdrose with 814 SQUADRON Gannet AS.4s for HMS Eagle, and also used Gannet T.2s whilst disem barked. To RNAS Eglinton 23 November 1957, and RNAS Culdrose 23 March 1959. Disbanded 30 September 1959.

Gannet AS.4 XA416 '288-J', XA419 '287-J', XA423 '286-E', XA424 '283-CU' then '285-J' XA425 '285-J' then '286-J', XA426 '286-J' then '286-CU', XA428 '284-J' then '284-E¹, XA431 '281-J' then '281-E', XA435 '280-J' then '280-E¹, XA454 '281-E¹, XA456 '286-J' then '283-E', XA467 '285-J' then '285-E', XA468 '287-E', XA471 '280-E', XG793 '282-CU¹. Gannet T 2 XG879

815 SQUADRON Formed 6 February 1956 at RNAS Eglinton with Gannet AS. 1s for *HMS Ark Royal*, and also used Gannet T.2s whilst dis To RNAS Culdrose 25 February 1957 to re-equip with Gannet AS.4s. Disbanded 15 July 1958.

Gannet AS.1 XA321 '293-0', XA336 '291-0', XA337 '296-O', XA338 '290-O', XA340 '292-0', XA341 '295-0', XA342 '296-0' then '292-0', XA344 '294-0', XA354 '298-0', XA345:291-O, WN368:295-O. Gannet T.2 XA515.

Gannet AS.4 XA410 '294-0', XA418 '292-R', XA420 '293-R', XA421 '294-R', XA425 '296-R¹, XA428 '296-CU', XA429 '291-R', XA464 '290-O', XA469 '297-R', XA470 '290-R'.

816 SQUADRON, RAN Formed 15 August 1955 at RNAS Culdrose with Gannet AS. 1s for HMAS Melbourne. Embarked 29 February 1956 for passage to Australia and from 7 May 1956 at RANAS Nowra when not embarked. Later also maintained a permanent flight at Nowra and used Gannet T.2s from March 1959 until October 1963. Disbanded 25 August

Gannet AS.1 WN456 '811-M', XA327 '305-Y', XA328 '304-Y', XA329 '424-B', XA330 '302-Y', XA331 '301-Y', XA332 '421-B' then '300-Y', XA389 '814-M¹, XD898 '826-M' then '847-M¹, XG787 '828-M' then '818-M'. Gannet T.2 XA517'855-NW.

817 SQUADRON, RAN Formed 18 August 1955 at RNAS Culdrose with Gannet AS.1 for HMAS Melbourne. Embarked 29 February 1956 for pas sage to Australia and from 7 May 1956 at RANAS Nowra when not embarked. Disbanded 18 August 1958.
Gannet AS.1 WN456 '312-Y', WN458 '314-Y', XA326 '432-B' then '311-

Y', XA334 '313-Y', XA350 '316-Y'.

820 SQUADRON Re-equipped with Gannet AS. 1s at RNAS Eglinton 7 March 1955 for *HMS Bulwark*. Transferred to *HMS Centaur* in January 1956 but disbanded 15 May 1956. Reformed 30 July 1956 at Eglinton with Gannet AS. 1s for *HMS Bulwark*, and also used Gannet T.2s whilst disembarked. To RNAS Ford 28 March 1957 and disbanded 2 December

1957. Gannet AS.1 WN378 '405', WN404 '324-B', WN426 '404-GN', WN445 '403-C, WN448 '326-C, WN464 '401-C then '321-C, XA340 '404-C then '324-C, XA349 '323-B', XA352 '321-B', XA364 '329-B', XA390 '322-B', XA391 '321-B', XA392 '323-B', XA394 '325-B', XA395 '326-B', XA402 '327-B', XA404 '324-B', WN352:321-B, WN411:408-B then 328-C. Gannet T.2 XA524'320'.

824 SQUADRON Re-equipped with Gannet AS. 1s at RNAS Eglinton, February 1955 for HMS Ark Royal. Disbanded at RNAS Ford 17 April 1956. Reformed 7 May 1956 at RNAS Culdrose with Gannet AS. 1s and T.2s and re-equipped with Gannet AS.4s by October 1956 for service aboard *HMS Ark Roya*\ then *Albion*. Disbanded 1 November 1957. Gannet AS.1 WN363 '333-O', WN391 '334-O', WN394 '335-Z', WN396 '411-O' then '331-O', WN419 '332-O', XA324 '337-O', XA348 '330-Z', XA360 '331-Z', XA362 '332-Z', XA363 '333-Z', XA364 '334-Z', WN356:337-O.

WN930.337-Z XG879. Gannet T.2 XG879. Gannet AS.4 XA417 '330-Z', XA418 '332-Z', XA420 '333-Z' then '333-A', XA422 '334-Z', XA423 '335-Z¹, XA424 '336-Z', XA427 '337-Z', XA429 '331-Z', XA464 '330-Z¹, XA469 '339-A, XA416:331-Z.

825 SQUADRON Formed 4 July 1955 at RNAS Culdrose with Gannet AS. 1s for *HMS Albion*, also using Gannet T.2s whilst disembarked. Disbanded 7 August 1956 at Lee-on-Solent. Reformed at Culdrose 6 May 1957 with Gannet T.2s and AS.4s, moving to RNAS Hal Far.

RNAS Culdrose 21 April 1958 and disbanded 29 April 1958. Gannet AS.1 WN349 '341-Z', WN375 '345-Z¹, WN377 '340-Z¹, WN404 '341 -Z', WN408 '342.-Z', XA319 '346-Z', WN399:411-CU, WN463:417-CU

Gannet T.2 XA516, XA526, XA528, XG869 '349'. Gannet AS.4 XA433 '341-CU', XA457 '347-CU', XA458 '348-CU', XA461 '345-CU¹, XA462 '346-CU', XG790 '340-CU'.

826 SQUADRON Re-equipped with Gannet AS. 1s at Lee-on-Solent January 1955 for *HMS Eagle*. Disbanded 22 November 1955. Gannet AS.1 WN364 '343-J', WN373 '344-J¹, WN392 '345-J', WN398 '347-J', WN409 '348-J', WN410 '349-J', WN418 '345-J', WN428:343-J.



831 SQUADRON Formed 1 May 1958 at RNAS Culdrose with Avengers, Sea Venoms and Gannet AS. 1s, but the latter left by the end of the year. Avengers replaced by Gannet AS.4s June 1959 and these by Gannet AS.6s in February 1961. To RAF Watton 26 July 1963 and disbanded 16 May 1966.

XA340'279' Gannet AS 1

Gannet AS.4 WN464 '275', XA414 '393-CU', XG831-276, XG798:277. Gannet AS.6 WN464 '395', XA459 '394', XA460 '397', XA472 '278' then '398', XG798 '397', XG831 '396', XA414:393.

847 SQUADRON Formed 17 March 1956 at RNAS Eglinton with Gannet AS. 1s and based at RAF Nicosia from 8 April 1956. Re-equipped with Gannet AS.4s June 1958. Left Nicosia November 1959 and disbanded at

Gainlet AS.48 June 1995. Left Nicosia November 1959 and dispartided at RNAS Yeovilton 1 December 1959.

Gannet AS.1 WN407 '088-HF' WN417 '087-HF', XA335 086-HF', XA355 '088-HF', WN357:088-HF, WN399:087-HF.

Gannet AS.4 XA431 '087', XA455 '088', XA462 '086', XA464 086'.

849 SQUADRON Flew Skyraider AEW.Is from RNAS Culdrose with embarked flights as required. Received Gannet AS.4s from September 1959 and began re-equipping with Gannet AEW.3s February 1960. Eventually operated Headquarters Flight and up to five embarked flights. Used Gannet T5s from September 1959, and AS.4s and AS.6s from September 1961 for COD and communications duties. To RNAS Brawdy 15 December 1964 and RNAS Lossiemouth 19 November 1970. Disbanded at RAF Lossiemouth 15 December 1978. Gannet AEW.3 XL449 '262-H' and 762-BY", XL450 '072-E' and '042-R, XL451 '432-R' and 762-BY', XL452 '330-H' then 766-BY', XL454 '331-H' then '261-H', XL456 '420-R' and '413-BY', XL471 '430-H' and '043-R', XL472 '421-R' then 760-BY', XL473 '410-CU' and '070-E', XL474 '423-R' and '260-H', XL476 '333-H' and 763-LM', XL479 '261-V then '044-R', XL480 '436-E' and 761-LM', XL481 '428-V and '260-V, XL493 '413' and '437-R', XL494 '432-H' then '042-R', XL497 '330-H' and '041-R', XL498 '333-H' and 767-BY", XL500 '414-H' and '042-R', XL502 764-BY¹ and 762-LM', XL503 '263-V then '072-E', XP198 '430-R', XP199 761-BY' then '044-R', XP225 '425-C and '261-H', XP226 765-BY' and '073-E', XP227 '071-E' then '263-V', XP229 '433-R' and 762-BY', XR431 '428-H' then '426-C, XR432 '423-V then 262-V, XR433 760-BY' then '044-R'. Gannet AS.4 XA430 '264' then '074-E', XA454 '447-CU' and '264-H', XA460 '446-CU' then 768-BY', XA463 '445' then 767-BY', XA466 '448-CU' then '3-V, XA467 '446-CU', XA470 '4-BY', XG783 '445-CU', XG786 '1-E' then '074-E', XG790 '040-R', XG797 766'. Gannet T.5 XG882 '450-CU' then 772-BY' and 771-LM', XG883 773-September 1961 for COD and communications duties. To RNAS Brawdy

Gannet T.5 XG882 '450-CU' then 772-BY' and 771-LM', XG883 773-BY', XG884 '452-CU' then 774-BY', XG885 771-BY', XG886 770-BY', XG888 770-BY' then 'LM', XG889 771-LM', XT752 772-BY¹ then 'LM¹. Gannet AS.6 XA460 777-LM'.

1840 and 1842 SQUADRONS, RNR Re-equipped with Gannet AS.1s and T.2s at RNAS Ford May 1956, sharing aircraft. Disbanded 10 March

Gannet AS.1 WN396 '855-FD', XA322:856-FD, XA352 '856-FD', XA353 '873-FD' then '876-FD', XA358 '875-FD', XA387 '877-FD', XA399 '878FD1, XA400 '879-FD1

Gannet N.4. XA417'856-FD'. Gannet T.2. XA523 '863', XA525 '864-FD', XG873, XG876:864.

BRITISH MISCELLANEOUS UNITS AND INDUSTRY USE

RN Station Flights

Abbotsinch Gannet AS. 1 XA363. Gannet T.2 XA529. Gannet T.5 XG882.

Anthorn Gannet T 2 XA529

Culdrose GannetAS.4 XG832. Gannet T.5 XG887:996-CU, XG889 '995-CU'.

Eglinton Gannet AS.1 WN366'916-GN'. Gannet T.2 XA509'920-GN,' XA519:920-GN. GannetAS.4 XA435. Ford Gannet T.2 XG880 '923-FD'.

Lee-on-Solent (for FONAC and FOAC) Gannet AS.4 XA430, XG786 ■FOAC/2-R'.

Yeovilton Gannet T.2 XG873. Gannet AS.4 XG832 '943-VL1.

RN Ships' Flights

HMS Ark Royal Gannet AS.4 XA430 '1-R', XG786 '2-R'. HMS Eagle GannetAS.4 XG786, '1-E', XG790 '1-E' HMS Hermes Gannet AS.4 XA454 '3-H', XA470 '4-H'. HMS Victorious Gannet AS.4 XA466'3-V.

RNAS Abbotsinch

Gannet AS. 1 XA363. Gannet AS.4 XA456.

RNAS Anthorn

RNAS Bramcote

Gannet AS.1 WN343, WN344.

RNAS Culdrose (including Predannack)

Gannet VR557. Gannet AS.1 WN391, XA342, XA363, WN346. Gannet AS.4 XA456.

RNAS Donibristle

Gannet T.2 XG871. Gannet VR546.

RNAS St Merryn Gannet AS.1 WN354.

RNAS Worthy Down

Gannet WE488

RNAS Yeovilton

GannetAS.1 WN453, WN376, WN421. Gannet AEW.3 XL480. GannetAS.4 XA454.

Continued on next page

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RN Air Electrical School (later Air Engineering School), Lee-on-Solent

GannetAS.1 WN346, WN391, WN453, XA342. GannetAEW.3 XP226, WN349.

GannetAS.6 XA459, XA460.

RN Air Engineering School, Arbroath

Gannet WE488. GannetAS.1 WN341, WN343'106, WN344, WN354, WN364, WN373, WN376, WN393, WN421, WN453 '111', WN454 '106', WN462

Gannet T.2 XA510, XA518, XA523, XG881. GannetAS.6 XG797.

RN Engineering College, Manadon

Gannet VR557, WE488. Gannet T.2 XA508

RN School of Aircraft Handling, Culdrose

Gannet AS.1 WN346, XA363. Gannet AS.4 XA456, XA459. Gannet AEW.3 XL500 'LM'.

Gannet AS.6 WN464, XA459, XG831.

RAF Leuchars

GannetAEW.3 XL502.

RAF Lossiemouth

GannetAEW.3 XL481, XR432.

RAF North Front, Gibraltar GannetAEW.3 XL494

431 Maintenance Unit, RAF Bruggen GannetAEW.3 XL450.

Aeroplane and Armament Experimental Establishment, Boscombe

Gannet VR546, VR557. Gannet AS.1 WN339, WN344, WN345, WN372, XA401, WN340, WN341, WN342, WN343, WN357. GannetAEW.3 XJ440, XL449, XL450, XL451, XL452, XL453, XL456, XL472, XL474, XL494, XL497, XL503, XP226. Gannet AS.4 WN372.

Gannet T.2 WN365, XA515. Gannet T.5 XG889.

Empire Test Pilots School. RAE Farnborough Gannet T.2 XA515'24', XG873'27'. GannetAS.1 WN429.

Maintenance Test Pilots School, Abbotsinch GannetAS.1 XA363, XA398. Gannet AS.4 XA463.

Royal Aircraft Establishment, Bedford

WN341. GannetAS 1 GannetAFW 3 Gannet VR546, VR557. XL450, XL474, XL502, XR433. Gannet T.5 XZG886, XG889.

Royal Aircraft Establishment, Farnborough GannetAEW.3 XL471. Gannet AS.1 WN342

Royal Radar Establishment, Pershore

Gannet AEW.3 XL456, XL502 76-P', XL503 '072-E', XR433. Gannet AS.1 WN393

Armstrong-Siddeley, Bitteswell Gannet VR546, WE488, VR557. Gannet AS 1 WN339 WN340 WN345, WN352, WN395, WN402, WN404, WN463.

Bristol-Siddeley, Filton Gannet AEW.3 XJ440, XL451, XL471

Dowty-Rotol, Culdrose

GannetAEW.3 XL500 LM\

Fairy Aviation, Hayes and White Waltham

Gannet prototypes VR546, VR557, WE488. GannetAS.1 WN339, WN343, WN344, XA325, XA401. Gannet T.2 WN365. GannetAEW.3 XJ440, XL449, XL450, XL454, XL456, XL476, XL478, XL503. Gannet AS.4 WN372. Gannet T.5 G-APYO.

Ferranti. Turnhouse

Gannet WE488. GannetAS.1 WN345.

Hamilton Standard, San Antonio, Tx, USA GannetAEW.3 XL482 (N1350X).

Gannet T.5 XG882-771-LM was the first production aircraft of this version. It served with 849 Squadron initially coded 450-CU and then after the move to Brawdy became

Continued from page 10

772-BY. (Official RN photo)

Continued from page 10
of Boscombe Down's long runway to make a single-engined take-off. Following repairs the airgle-engined to the A&AEE in June where pilots of the RN Test Squadron began to put it through its paces, including sessions of dummy deck landings.

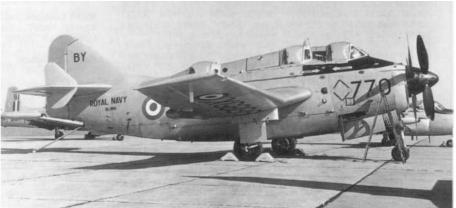
These completed, VR546 moved to RNAS Ford to be prepared for flight deck trials and on 19 June 1950 embarked in HMS Illustricus. During the course of the day the

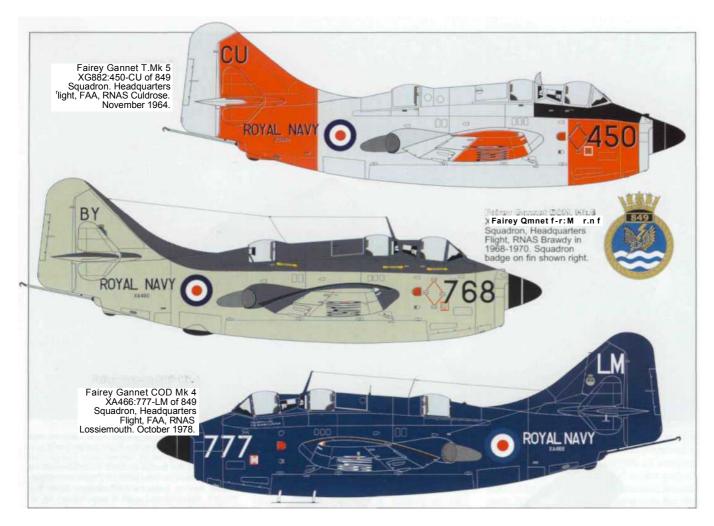
Illustrious. During the course of the day the aircraft was flown by several naval pilots as well as by Peter Twiss, Fairey's deputy chief test pilot, and carried out 25 landings, making it the first turbo-prop aircraft to land onboard and also take off from an aircraft carrier. Results were generally satisfactory except that as the aircraft was slightly tail-heavy it tended to sit back on its tail bumper during flight deck movements. Loss of some elevator control was also still being reported at slow speeds, especially during the final approach when the throttles were closed as the aircraft crossed the round-down. It was around this time that Fairey revised its aircraft designation system resulting in the Type Q becoming the Type 17, or the GR. 17 as it was often referred to until it received a name.

When VR557, the second prototype, made

By September 1966 when this picture of By September 1966 when this picture of XG886 was taken, 849 Squadron had moved to RNAS Brawdy and the Headquarters Flight's nose and tail codes changed accordingly. The size of the fuselage RN title was also in the process of being reduced on the Gannet T.5s and XG886 shows a smaller-sized layout than previously which was not widely adopted. (APN)







its first flight on 6 July 1950 it incorporated the ventral radome now positioned below the jet pipes, but still had a crew of two and once it had joined the flight test programme it was possible to withdraw VR546 for modifications. These involved moving the ventral radome farther aft clear of the jet pipes, the position finally adopted on production aircraft, and fitting a large aerodynamic fairing to the after decking to represent the shape of the proposed third cockpit canopy. In this guise VR546 was rolled out on 13 March 1951 to resume flight trials but stability problems persisted, exacerbated both by the dummy canopy which caused turbulence across the tail and by the drag from the ventral radome when lowered. In an effort to overcome this, in May 1951 auxiliary fins were added above and below each tailplane as a means of increasing fin area and improving directional stability, with the aircraft making its first flight with these on 3 June

An alternative approach was tried on VR557 with the addition of B prominent fence to the leading edge of each wing outer panel, but this was not adopted. Trials then continued until December when VR546 was again withdrawn for modifications, this time the lengthened weapons bay being added The opportunity was also taken to fit an

HMS Victorious Ship's Flight COD Gannet XA466:3-V ashore at Singapore around 1966. It carries the ship's badge on the fin and the spinners are banded in red and black, the colours of 840 Squadron's 'A' Flight which was responsible for operating the aircraft on behalf of Flag Officer Aircraft Carriers and the ship's flight. (APNI

experimental tail with the tailplane mounted at the top of the tin, clear of the turbulence, m a further attempt to improve handling. The aircraft made Rve flights in this COnfig uration beginning on 29 January 1952. but the experiment was not proceeded with and the normal tail was restored instead attention turned to the shape of the n pit and various canopy shapes were tried to minimise turbulence across the tail control surfaces

QUANTITY PRODUCTION BEGINS

By about 1951 the Type I 7 had been named Gannet probably following its BUCC< Competitive trials held during October 1950 against the Blackburn YB.I and the Short SB.3. As a result of these trials, partly held onboard HMS Illustrious, an order was placed for 100

Gannet AS I aircraft on 14 March 1951, In order to expedite the introduction of the Gannet, which had been given a 'super priority' status, production was to be split between Fairey*s Iiases and Stockport factories with the majority being built at Hayes At both sites the completed aircraft would have to be transported by road from the factors to a suitable airfield for test flying.

From Hayes the aircraft went to RAF Northolt for their first flight, then were flown to White Waltham for the installation of operational equipment and final testing before acceptance by the RN. The Stockport-built aircraft went to Ringway from where the test flying could be carried out.

This order was placed before the production prototype had flown but already it was apparent that a serious gap in Britain's antisubmarine defences would







PAGE 15 FAIREY GANNET WARPAINT

In late 1971 the B Flight COD Gannet was XA466040-R It wore the flights black and yd low colours but not its bee emblem. The aircraft still carried the badge of HMS Victorious on the fin sides from its time with 'A' Flight in the mid-1960s, having been held in storage from that flight's disbandment until it was issued to B Flight, (author)

develop before the Gannet became operational. Allowing two years until the first aircraft left the production line the situation began to cause concern, especially as service trials would then have to take place and crews be trained before the Gannet became operational. Accordingly contingency plans were drawn up and during 1952 100 Grumman TBM-3 Avengers were made available to the RN through the US Mutual Defense Aid Program to act as a stop-gap until the Gannet AS. Is were operational in sufficient numbers. The first of around 80 of these Avenger AS.4s arrived on 30 March 1953 and the type remained in front line service until supplanted by the Gannet in 1955.

The third Gannet prototype made its maiden flight on 10 May 1951 lacking the auxiliary tins which were still under evaluation on VR546, and with the radome positioned farther back below the jet pipes At this stage the final layout of the crew positions had still to be finalized so WE488 had a two-scat rear cockpit covered by an elongated transparency in ease it was decided to sit the Observer and radar operator together for better crew co-operation. actual cockpit layout was unrepresentative however, because the two seats faced each other. In June 1951 WE488 was given the auxiliary fins and eventually it was also fitted wuh the definitive rear canopy shape for what had become the single-seat rear cockpit with its rearwardfacing seat. Thereafter it was progressively modified to embody the various refinements made to the basic design and continued with company testing until it was written off in an accident at Turnhouse on 9 October 1953 whilst undertaking radar trials for Ferranti.

Gannet AS.4 (COD) XA430:047-E of 849 Squadron 'D' Flight in 1971. It carries the flight's blue and white colours on the spinner, auxiliary fins and arrester hook, and also around the nose of the mail pod fitted below the port wing. A white eagle motif is marked towards the front of the fin and various squadron zaps are also carried on the tail and rear fuselage. (MAP)

Thereafter it was used as a ground instructional airframe, first at Worthy Down and from July 1955 at the RN Air Engineering School, Arbroath.

Because handling trials still showed that the Gannet had a propensity for sitting on its tail during ground moves it was decided to move the main undercarriage oleos slightly farther back on production aircraft. To test this theory VR546 was quickly modified by having its main oleos sloped backwards, so that the wheel touched the ground 12 inches farther back than previously, and as this prevented the undercarriage from retracting the wheels were fixed in the lowered position. In this state VR546 was delivered to Boscombe Down in May 1952 for further service trials, which included flight deck handling tests and 66 deck landings and launches aboard HMS Eagle.

On completion of these trials VR546 had its normal undercarriage restored and continued with the Gannet test programme until finally grounded in early 1954. It then appears to have gone to Armstrong Siddeley at Bitteswell before moving on to RNAS Anthorn in 1955. From there it went to the Aircraft Holding Unit at Abbotsinch during September 1956 for spares recovery and the following month its hulk went to RNAS Donibristle where its remains were still present in June 1957, before being disposed of as scrap. The second prototype, VR557, was grounded during the mid-1950s and passed through RAE Bedford and the RN Engineering College, Manadon before being scrapped, with sections then being used for ground instruction at Culdrose from May 1956.



THE GANNET AS.1

As it was eventually built the Gannet AS.I was a three-seat aircraft with the pilot and observer in the front two cockpits, and a rearward-facing radar operator in the rear one. The radar itself was positioned aft of the weapons bay with its scanner in a ventral radome which was lowered when the radar was operating. Access to the cockpits was via a built in drop-step low on the starboard side of the nose with kick-steps on the fuselage side ahead of the wing and walkways across the wing roots. All the canopies were manually operated and slid aft, and could be jettisoned in an emergency. For carrier operations the aircraft had hydraulic wing folding with each wing folding at two points. Production aircraft were powered by the Double Mamba 100 engine of which the right unit drove the front propeller and the left unit the rear, and featured a number of changes which had not been incorporated on WE488. These included the re-positioned main undercarriage legs with revised doors, changes to the nosewheel oleo and slightly revised glazing to the tunnel between the front two cockpits. Also, as a final remedy to the old trim problem caused by the

deployment of the flaps there was now a servo connection between the flaps and the tailplane incidence control. With this modification flap deployment now automatically altered the tailplane angle of incidence to maintain aircraft trim.

The Gannet's offensive weapons were mostly carried in the enclosed weapons bay and consisted of various combinations of homing torpedoes, depth charges, sea mines and conventional 2,000 lb, 1,000 lb or 500 lb bombs, besides parachute flares, marine markers and sonobuoys. There were also four mounting points below the centre folding panel of each wing capable of carrying up to a total of 24 unquided rocket projectiles. The aircraft was fully stressed for catapult launches with pick-up points for the catapult bridle either side of the fuselage, above the front end of the bomb doors, and an arrester hook was mounted at the extreme rear of the fuselage. Under certain conditions the aircraft could carry out a free takeoff from a carrier but operationally this was seldom

Gannet AS .4 (COD) XA430:074-E belonging to HMS Eagle seen in the holding pattern before landing on. The lowered tail hook indicates that the aircraft is ready to be taken on board (author)



831 Squadron Gannet AS.6 XG831 in 1965. The only squadron markings carried at that time were the red spinners with a single narrow yellow band, and red upper auxiliary fins with a yellow lightning flash. The latter marking was resurrected for No. 360 Squadron, RAF, to show that unit's naval lineage. (APN)

practicable because of other aircraft ranged on deck.

On 9 June 1953 WN339, the first production Gannet AS.I. made its maiden flight from Northolt with Peter Twiss at the controls, and soon afterwards flew to White Waltham for fitting out. Thereafter aircraft were delivered to the RN from both the Hayes and Stockport production lines, with WN370 being the first Gannet to leave the Manchester factory in 1954. The early production aircraft were all used for various test purposes by Fairey, Armstrong Siddeley, Ferranti and the A&AEE, and by October 1953 WN339 from Boscombe Down had successfully completed flight deck trials aboard *HMS Illustrious* and *HMS Eagle*. Armstrong Siddeley used four aircraft at Bitteswell for work on the Double Mamba. including WN340 which became a test-bed for the more powerful ASMD.3 engine, while WN345 went to Turnhouse to be used by Ferranti as a radar development aircraft until it too went to Armstrong Siddeley. By September 1953 testing of the Gannet had progressed sufficiently for WN341 to appear at the Farnborough air show, marking the public unveiling of the RN's new anti-submarine aircraft.

Aircraft deliveries continued so that by the spring of 1954 sufficient aircraft were available for the Gannet's service trials to begin. Accordingly from 15 March 1954 aircraft were assigned to RNAS Ford for 703 Squadron, the RN's Service Trials Unit, going to equip 703X Flight which formed there that day tasked with carrying out the RN evaluation of the Gannet AS. 1. By the flight's formal commissioning ceremony on 5 April it had its complement of four aircraft, WN347 to WN35O, and flying operations continued until the end of the year. During these trials, which included deployments aboard HMS Albion and HMS Illustrious. two aircraft were lost in accidents. One was seriously damaged whilst landing with a total hydraulic failure and WN348 ditched on 24 August following an engine failure during a catapult launch from HMS Albion. Despite these mishaps the service trials were generally satisfactory. However they did reveal that the Gannet was still prone to



lack of elevator control at low engine power settings, so as a temporary measure pilots were instructed not close the throttles on the approach at speeds below 100 kts but to continue flying the aircraft into the deck; later. with the advent of the angled flight deck, this was to become standard procedure. The trials also showed up a tendency for engine compressor stall under certain flight conditions and this led to the Gannets being grounded in August 1954 for two months so that modifications could be made to the propeller pitch controls and anti-torque switches. The latter were necessary to prevent a spinning propeller from transferring its torque back to an engine which was running at lower revolutions per minute, and so damaging the engine.

Run simultaneously with 703X Flight's service trials were Fairey's own climatic trials of the Gannet. For these WN344 went to Canada in June 1954 for cold weather trials and also to be evaluated by the Royal Canadian Navy, whilst WN372 went to Khartoum in November for tropical trials. Once the service trials finished on 21 December 1954 703X Flight was disbanded, but 703 Squadron retained a small number of Gannet AS. Is on strength for further testing until it too disbanded on 17 August 1955, to be replaced by 700 Squadron.

THE GANNET JOINS THE FLEET

With its service trials completed the Gannet was now ready for front-line service. The first operational unit to receive the Gannet AS.I was 826 Squadron which had been flying Firefly AS.6s from

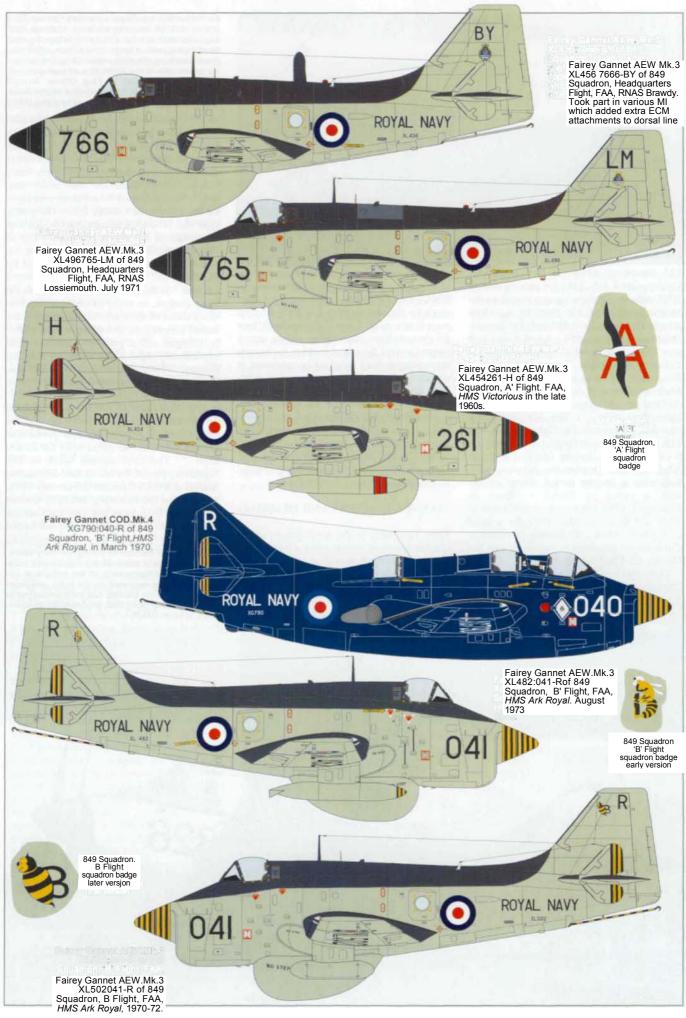
HMS Glory until it returned to Lee-on-Solent in January 1955 to re-equip. Later that month it received eight Gannet AS. 1 s and transferred to HMS Eagle, embarking for the first time on 4 June after an earlier period of deck-landing practice. Following a short cruise in the Mediterranean the squadron disembarked to Hal Far then returned to Leeon-Solent staging back through France. One final period was spent aboard HMS Eagle during the autumn of 1955 exercising off Scandinavia then the squadron returned to Lee-on-Solent on 22 November and was disbanded. These two short cruises aboard HMS Eagle were very much to see how the Gannet performed under operational conditions, and once they were under way the RN set about the rapid re-equipment of its Avenger anti-submarine squadrons at RNAS Eglinton, their parent shore station.

In all five operational squadrons received the Gannet AS.I for anti-submarine duties aboard the RN's Fleet Carriers beginning with 824 Squadron which gave up its Avengers in February 1955. It subsequently served aboard *HMS Ark Royal* and disbanded in April 1956, but reformed at RNAS Culdrose the following month again with eight Gannet AS. 1 s. This time however, it was to allow the squadron a period of time ashore in which to work up prior to becoming the first unit to receive the improved Closely following 824 Gannet AS.4. Squadron was 820 Squadron which received eight Gannet AS Is at Eglinton in March 1955 for service onboard HMS Bulwark and later HMS Centaur. Following a brief period of disbandment during mid-1956, 820 Squadron reformed at RNAS Ford and once more flew its Gannet AS Is from HMS Bulwark until it was disbanded at the end of 1957. When the squadron reformed in January 1958 however, it was as the Fleet Air Arm's first operational squadron equipped with Whirlwind HAS.7 helicopters which, by that time, were set to start replacing all the RN's fixed-wing anti-submarine aircraft.

The next unit to receive the Gannet was 825 Squadron, which formed al RNAS Culdrose on 4 July 1955 for service aboard



The 849 B' Flight COD Gannet XG790:040-R climbing out from RAF Luqa during 1970 with a mail pod under each wing. The flight's original bee emblem is marked on the forward fuselage sides on a white diamond background panel. B' Flight was unusual in giving its COD a code number preceding the codes used by its AEW.3 aircraft. (G.Mangion)





HMS Albion. Following one cruise to the Mediterranean and Far East the squadron returned home and was disbanded at Lee-on-Solent on 7 August 1956. Another new unit was 812 Squadron which formed at RNAS Eglinton with eight Gannet AS.Is on 7 November 1955 and served one tour in the Mediterranean with HMS Eagle before also disbanding at Lee-on-Solent, on 13 December 1956. The last sea-going squadron to receive the Gannet AS.I was 815 Squadron which formed at Eglinton on 6 February 1956, having operated Avenger AS.5s up until October the previous year. Following a lengthy period ashore ending with a move to RNAS Culdrose in November 1956, the squadron embarked in HMS Ark Royal in May 1957 for a brief cruise to the USA. Following its return to Culdrose the squadron re-equipped with the Gannet AS.4 in November 1957.

One other operational squadron to use the Gannet was very much a hybrid. When 847 Squadron formed at RNAS Eglinton on 17 March 1956 from part of 812 Squadron, it was with three Gannet AS.Is for operations

in Cyprus, although nominally based at RNAS Hal Far, Malta. Following a brief workup the unit deployed to RAF Nicosia were it arrived on 8 April. It remained there for the next three years flying surface search patrols around the island looking for vessels attempting to land weapons or personnel in support of the Greek Cypriot terrorists fighting for independence and union with Greece In June 1958 the squadron re-equipped with the Gannet AS.4 and continued its patrols until the internal situation had calmed down. The squadron then returned to the UK and disbanded at Yeovilton on 1 December 1959. with Cyprus being granted its independence the following year.

GANNET TRAINERS AND TRAINING

From very early in the development of the Gannet it was recognized that a trainer version of the aircraft would be of great value. It was felt that the combination of a 'double' turbo-prop engine and independent contrarotating propellers would take some getting used to. Besides assisting pilots to convert

In 1965 HMS Ark Royal operated Gannet AS.4 (COD) XG786:2-R, shown here visiting RAF Luqa, Malta. It carries a mail pod below the starboard wing with a large Post Office advertisement stuck on the side proclaiming the sixpenny postal rate at the time!. The aircraft was one of several assigned to Flag Officer Aircraft Carriers, hence the fin marking and the Rear-Admiral's flag and code on the nose sides.(APN)

to the Gannet a training version would also allow trainee pilots to practise deck landings and launches from carriers in the company of an instructor who could assume control should the need arise. Accordingly, once Gannet AS.I production was under way details were finalized for a trainer version to be designated the Gannet T.2. The prototype was WN365, a Gannet AS. 1 which was converted on the Hayes production line to the new standard, basically by deleting the search radar and its ventral radome and by installing full dual controls in the second cockpit. As the student pilot would sit in the front cockpit, in order to improve the forward vision of the instructor the shape of the tunnel between the two canopies was slightly changed and a periscope was mounted immediately ahead of the instructor's sliding canopy. Provision was made in the rear cockpit for either a radio operator or two passengers

The first flight of WN365 took place on 16 August 1954 and the following year the RN started to receive the first production Gannet T.2s from an initial order for 23 aircraft. The first aircraft went to 737 Squadron, part of the Naval Anti-Submarine School at RNAS Eglinton in February 1955, to be joined the following month by Gannet AS. Is, and by June of that year the Gannets had replaced the squadron's anti-submarine

XD898:826-M, a Gannet AS.1 of 816 Squadron aboard HMAS Melbourne during the early 1960s. During the early years of the squadron's existence the last figure only of the individual aircraft code was repeated on the main undercarriage doors. This aircraft has an unusual pylon below the inner wing fold, probably for an external fuel tank. (MAP)



Gannet T.2 XA514:878-NW was typical of the trainers used by 724 Squadron, RAN, at Nowra being Aluminium overall with British-style yellow trainer bands. This particular aircraft is fitted with the two-tier underwing racks for 16 rocket projectiles. (APN)

Firefly aircraft. The School's other component unit was 719 Squadron, equipped with Firefly T.7s for basic anti-submarine training, and although it started to receive Gannet AS.Is and T.2s from November 1955 its last Firefly did not leave until June 1956. This then remained as the training organisation until 22 November 1957 when the Eglinton school was renamed the Naval Anti-Submarine Operational Flying School and 737 Squadron disbanded, its advanced training role being taken over by an expanded 719 Squadron. This squadron continued to use Gannet AS. Is and T.2s until it too disbanded on 17 March 1960 with completion of the Fleet Air Arm's last fixed wing antisubmarine OFS course.

Once operational flying training on the Gannet was under way it was possible to divert some Gannets to 796 Squadron, a component of the RN Observer and Air Signals School at RNAS Culdrose. The squadron began to receive Gannet T.2s from February 1957 and AS.Is from that April, with the last of its Firefly T.7s leaving in December, but its time with Gannets was brief as 796 Squadron was disbanded on 1 October 1958 as part of a general reorganization of RN flying training. On many occasions Gannet T.2s were also issued to front line squadrons whilst ashore, particularly if they were newly formed, to assist in pilot conversion and deck landing practice. The RN's Maintenance Test Pilots School at Abbotsinch also used various Gannets but tended to borrow aircraft held by the Aircraft Holding Unit or Abbotsinch Station Flight. It did, however, have Gannet AS.I XA363 as a ground instructional airframe from March 1959. One other user of the Gannet T.2 was 728 Squadron at Hal Far, Malta, the RN's Mediterranean Fleet Requirements Unit, which briefly had one on strength during 1957.

Once the Gannet was in service the RN continued to carry out various trials concerning the airframe, engine and equipment, and also operational tactics. On 18 August 1955 700 Squadron, the RN Trials and Requirements Unit, was formed at RNAS Ford to take over from 703 Squadron, inheriting the latter's aircraft including two Gannet AS. Is. In due course 700 Squadron also received Gannet AS.4s and, briefly in 1959, a Gannet T.2, and conducted all manner of service trials on the types. The squadron moved to RNAS Yeovilton in September 1958 with the closure of Ford but was disbanded in July 1961. Tactical matters on the other hand were the responsibility of 744 Squadron, the Naval

Top right: Royal Australian Navy Gannet AS.1 XG787 shown in its delivery finish at the SBAC show, Farnborough in September 1957. The Sky and Extra Dark Sea Grey finish was the same as that used by the Royal Navy, and the Australian aircraft retained their British serial numbers which were marked on the rear fuselage side only. (APN) Right: The ex-724 Squadron Royal Australian Navy Gannet AS.1 XA434:846-NW preserved at RANAS Nowra in its original colours after withdrawal from service in 1964. The aircraft was later repainted. (A.W.Hall)



Air-Sea Warfare Development Unit at Culdrose. This received Gannet AS.Is from May 1955 which at first supplemented then replaced the unit's Firefly AS.6s, and following a redesignation as the Naval Anti-Submarine Development Unit it continued to use them until its disbandment on 31 October 1956.

DESIGN IMPROVEMENTS

Even before the first Gannet AS.I had joined the fleet both Fairey and Armstrong Siddeley were working on design improvements. As the aircraft's weight gradually rose, mainly due to additions to its armament and sonic equipment, a more powerful version was seen to be necessary if further

development of the type was to be possible. Armstrong Siddeley was already working on the more powerful ASMD.3 version of the Double Mamba developing 3,035 shp, so putting this into the Gannet was seen as the next logical step, and in 1954 plans were prepared for a re-engined Gannet.

When WN372 returned from tropical trials at Khartoum it was taken to Hayes where it was fitted with a Double Mamba 101, the-production version of the ASMD.3, effectively becoming the prototype Gannet AS.4 although it was not fully representative of the new version. The aircraft first flew with the new engine from RAF Northolt on 12 March 1956 and in July went to Tripoli, Libya for hot weather trials, with XA412, the first







production aircraft, making its maiden flight on 13 April. The preceding two aircraft on the Hayes production line, XA410 and XA411, had already been completed as AS.Is but were immediately converted to AS.4 standard before their delivery in May, 1956.

Because of its similarity to the Gannet AS. 1 service trials were brief and delivery of Gannet AS.4s to the RN began that autumn. Outwardly there was nothing to distinguish between the two versions except that the two circular port holes ahead of the rear canopy were blanked off on the Gannet

816 Squadron RAN Gannet AS.1 XA331:859-M in 1965. The spinners were green with a single yellow band and the arrester hook was also banded in the squadron colours. However, the unit badge below the cockpit front does not appear to be that of 816 Squadron. (MAP)

AS.4, with additional equipment being stowed in this part of the fuselage forward of the aircrewman's seat. However, it is probable that some AS.Is also had these windows blanked out as they threw light from behind the operator across the radar screen.

At the same time the Gannet AS.4 was produced a re-engined version of the Gannet T.2 was also planned. There was no prototype of this version but instead the existing Gannet T.2 contract was amended so that eight aircraft on the Hayes production line, XG882-887 and XG889-890, were given the new engine and emerged as Gannet T.5s. The first one made its maiden flight from Northolt on 1 March 1957. The prototype Gannet T.2, WN365, was converted to T.5 standard and from March 1960 was used by Fairey at White Waltham as a communications and training aircraft with the civil registration G-APYO, until being put into storage in 1961. However in 1966, by which time Gannet trainers were in short supply, it was bought by the RN, given the new serial

Left: Throughout their service career the German Gannet AS.4s seldom carried no unit markings other than the MFG.1/1 squadron code on the rear fuselage which was probably retained when the aircraft transfered to MFG.3. All aircraft carried the fouled-anchor emblem of the Federal German Navy on the nose, as shown here on F9392 UA+111. Below: German Navy Gannet AS.4 F9394 UA+112. The aircraft has the standard British Sky and Extra Dark Sea Grey finish with the MFG.1/1 code group on the rear fuselage sides only. The individual aircraft number is repeated in Sky on the inner wing





Gannet T.2 LA-01 of the Indonesian Navy at Blackbushe in the early 1960s. It wears the standard British trainer finish of the period of overall Aluminium with yellow trainer bands but also had yellow spinners. The serial was as allocated before delivery but was soon changed so that the numerical group followed on from those assigned to the AS.4s. Most probably this aircraft eventually became LA-18. (APN)

number XT752 and put back into service. In 1967 the Gannet T.2 XG888 was also bought back, this time from the RAN, brought up to T.5 standard at Hayes and finally delivered to the Fleet Air Ann in August the following year. It had also been planned to convert XA518 in 1967 but work was abandoned the following year and the airframe sold for scrap.

The first unit to receive the Gannet AS.4 was 824 Squadron at Culdrose which was charged with carrying out further service trials at sea, under operational conditions. The squadron disposed of its last Gannet AS Is by October 1956 and following a period working up embarked in HMS Ark Royal during January 1957 for passage to the Mediterranean. Later that month the squadron transferred to HMS Albion off Malta, and the rest of the year was taken up with further short deployments until the squadron disbanded at Culdrose on 1 November 1957. Further testing was undertaken ashore by 700 Squadron at Ford, later moving to Yeovilton, which had a number of Gannet AS.4s on strength from February 1957 until February 1960.

The next unit to receive the Gannet AS 4 was 814 Squadron which formed at RNAS Culdrose on 14 January 1957 with eight aircraft. It embarked briefly in HMS Eagle during August that year and moved to RNAS Eglinton during November, carrying out several more deployments before finally disembarking to Culdrose in March 1959 and disbanding there at the end of September. The last squadron reformed to operate the Gannet AS 4 during 1957 was 825 Squadron at Culdrose. In January the following year it moved to Hal Far to participate in a series of exercises in the Mediterranean, on completion of which it returned to Culdrose and disbanded on 29 April 1958.

Another unit that operated the Gannet AS.4 for only a matter of months was S15 Squadron, which re-equipped with the type in November 1957. It did one deployment to the Mediterranean the following year aboard HMS Ark Royal then returned to Culdrose where it disbanded on 15 July 1958. By late 1958 helicopters had all but replaced the Gannet as the Fleet Air Arm's anti-submarine weapon, but then the Whirlwind HAS.7 began to experience engine problems. This meant that not only was 814 Squadron given a short reprieve but one final Gannet squadron was also formed during 1959. On 20 April that year 810 Squadron formed at Culdrose with six Gannet AS.4s for service aboard HMS Centaur, embarking in June 1959 for a cruise through the Mediterranean to the Far East and Australia. The

One of two Gannet AS.1s delivered to Indonesia as ground instructional airframes was WN355 which was given the serial AS-00. It is here shown on display in Jakarta repainted in a Sky and Extra Dark Sea Grey finish very similar to that worn by the operational Indonesian Gannets. (AW.Hall)



squadron returned to Culdrose in April 1960 then re-embarked in June for the last time, carrying out exercises in the Baltic and around Scandinavia before disbanding on 12 July 1960, a date marking the end of the Gannet's career in anti-submarine warfare.

During the 1950s it became clear that ever increasing amounts of electronic equipment would become available to anti-submarine aircraft, and Fairey proposed two versions of the Gannet to make the most of the new technology. Foreseeing that payload would be the crucial factor Fairey toyed with the idea of optimizing one version of the Gannet for submarine detection, filling the fuselage with electronic equipment and sonobuoys, whilst the other version would be loaded with the offensive weaponry. In one sense this proposal was a retrograde step because it went back to the two-aircraft, hunter-killer team approach. However, the two factors that counted most against this idea were shortage of space onboard carriers for two types of anti-submarine aircraft and, more importantly, the Admiralty's decision that the future of anti-submarine warfare lay with helicopters. Accordingly the idea was not pursued for any length of time.

SUPPORT DUTIES

Besides the front line anti-submarine squadrons and their operational training units Gannets were also used for a short time by the Royal Naval Volunteer Reserve. Once the sea-going units had been reequipped Gannet AS. 1 s and T.2s were delivered to the Channel Air Division, RNVR at RNAS Ford, where a pool of aircraft was shared between 1840 and 1842 Squadrons as required. Deliveries started in February 1956 and in addition at least one Gannet AS.4 was delivered to Ford before all Reserve flying squadrons were disbanded on 3 October 1957. This now meant that once a type's front line service was over the aircraft became redundant and were disposed of almost at once, helping to explain why the service career of the anti-submarine Gannets lasted little more than five years.

That said, a number of Gannet AS.4s did survive, albeit in other guises, until the mid-1970s. One unit to use the type in some numbers was 831 Squadron which had formed at RNAS Culdrose in May 1958 as an electronic warfare training and development squadron equipped with the Avenger AS.6 and Sea Venom FAW.21. Several Gannet AS.Is were also used because





the long-term plan was to replace the Avengers with specially modified Gannet AS.4s. These arrived in February 1959 and continued in use almost up until the squadron disbanded in August 1966, by which time it was based at RAF Watton. The role of the squadron was to train RN personnel to operate in an electronic warfare (EW) environment and for this the squadron's aircraft carried radar and communications jammers of various types. Additionally 831 Squadron also had the task of evaluating new EW equipment and tactics.

As an EW platform the Gannet AS.4 had the advantage of long endurance, a large stores bay in which to carry the necessary equipment, and a third crew member who

could be dedicated to operating the EW equipment. It could also embark when required to provide a more realistic 'offensive' jamming role for a ship's air group during exercises and so do away with the need for shore-based support aircraft. These EW Gannets had few external differences to identify them other than extra aerial masts along the decking, and their mystery was preserved by the retention of the AS.4 designation. External equipment pods could also be carried on an additional pylon below each wing root. However, by about 1960 they were referred to as Gannet AS.6s presumably to reflect significant internal modifications to the weapons bay, electrical wiring looms and radios, and reportedly also the fitting

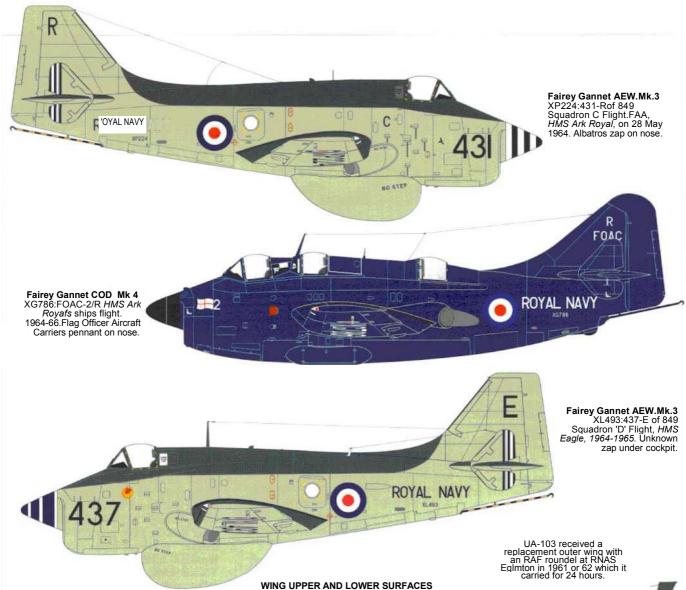
Gannets were transported to Hayes for refurbishment on a specially rigged low-loader. Here the fuselage of Gannet AS.4 XA430 (see page 15) is shown making the journey for full conversion to COD standards following its period of evaluation at Lee-on-Solent in the early 1960s. Note the ventral radome which was removed as part of the conversion. (APN)

of an updated radar. Even so they still operated under the cover of being anti-sub-marine aircraft so as not to attract undue attention. Today reports continue to circulate of their being designated Gannet ECM.4 and ECM.6, or similar, but these most probably reflect unofficial designations.

A more public role for the Gannet AS.4 was as a carrier onboard delivery (COD) aircraft carrying mail, personnel and light stores out to carriers at sea and back. For this the radar equipment fitted was removed and improved HF radio equipment fitted involving a longer aerial wire emerging from the port aft fuselage just above the jet pipe. The weapons bay was adapted to take panniers for stores or even a long-range fuel tank, and a baggage pod could also be carried on a pylon mounted below each wing immediately inboard of the inner wing fold. In this role the aircraft had a crew of two and could carry one passenger in the rear cockpit. A Gannet AS.4 (COD) was normally assigned to each carrier at sea and operated as part of the ship's flight, with HMS Ark Royal being the first in 1961. When not embarked the COD Gannets could

The Gannet AEW.3 aerodynamic prototype XJ440 fitted with the original short arrester hook but with the tail bumper removed. It originally flew in an unpainted finish but was later given the standard Sky and Extra Dark Sea Grey colour scheme with black spinners used by operational aircraft





often be found at Lee-on-Solent, close to Portsmouth. From around the mid-1960s the COD Gannets were transferred to 849 Squadron which by then was the RN's only front line Gannet operator, with one aircraft being assigned to each sea-going flight. Embarked COD Gannets were withdrawn in 1972 when HMS Eagle paid off and the more capacious Sea King took over the role on HMS Ark Royal. Curiously enough during the 1950s a ship to shore communications version of the Gannet had been proposed. Because of the available space within the after fuselage of the Gannet AS.I it had been suggested that the rear cockpit area be extended to accommodate four passenger seats with suitable portholes, and the stores bay become a cargo hold. This version of the aircraft was referred to as the Gannet Courier, but nothing came of the idea.

Besides the specialised Gannet AS.4(COD) standard Gannet trainers were often attached to various station flights for general communications work or for pilot continuation training or instrument rating checks. Normally these were at air stations which housed Gannet squadrons and included Culdrose, Hglinton and Ford, but Gannet trainers were also used by stations with aircraft repair and overhaul facilities such as Abbotsinch and Anthom for use by the maintenance test pilots. RNAS Yeovilton was unusual in that from 1961-62



Indonesian Navy



Federal German Navv



Royal Australian Navy



Fleet Air Arm Gannet T.5

FAIREY GANNET PRODUCTION

Fairey Aviation construction numbers appear after serial

ROYAL NAVY

Fairey Gannet prototypes

VR546 (c/n F8270), VR557 (F8271) and WE488 (F8749).

Fairey Gannet AS.1

WN339-364 (F9111-9136), WN366-378 (F9138-9150), WN390-429 (F9151-9190), WN445-464 (F9191-9210), XA319-364 (F9211-9256), XA387-409 (F9257-9279), XA434 (F9304), XA436 (F9306), XD898 (F9327), XG784-785 (F9352-9353), XG787 (F9355), XG789 (F9357), XG791-792 (F9359-9360), XG795-796 (F9363-9364), XG825-826 (F9367-9368). 181 aircraft Fairey Gannet T.2

WN365 (F9137), XA508-530 (F9328-9350), XG869-881 (F9398-9410), XG888 (F9417), XA531 can celled. Conversion from AS. 1 XA333. 38 aircraft

Fairey Gannet AEW.3 prototype

XJ440 (F9431) 1 aircraft

Fairey Gannet AEW.3

XL449-456 (F9432-9439), XL471-482 (F9440-9451), XL493-503 (F9452-9462), XP197-199 (F9463-9465), XP224-229 (F9466-9471), XR431-433 (F9514-9516) 44 aircraft

Fairey Gannet AS.4 Prototype WN372

converted from AS.1.

XA410-433 (F9280-9303), XA435 (F9305), XA454-473 (F9307-9326), XG783 (F9351), XG786 (F9354), XG788 (F9356), XG790 (F9358), XG793-794 (F9361-9362), XG797-798 (F9365-9366), XG827-836 (F9369-9378), XG839-840 (F9381-9382), XG843-844 (F9385-9386), XG846 (F9388), XG849-850 (F9391-9392), XG852-853 (F9394-9395). XG837, '838, '841, '842, '845, '847, '848 '851, '854 and '855 cancelled. Conversion from AS.1 WN464. 74 aircraft

Fairey Gannet AS.4 COD conversions from AS.4 XA430, XA454, XA466, XA470, XG786, XG790.

6 aircraft

Fairey Gannet T.5

XG882-887 (F9411-94160), XG889-890 (F9418-9419).

Conversion from T.2 XG873, XG888, XT752 (originally WN365).

11 aircraft

3 aircraft

Fairey Gannet AS.6 conversions from AS.4

WN464, XA414, XA459, XA460, XA472, XG797, XG798, XG831, XG832

9 aircraft

ROYAL AUSTRALIAN NAVY

Fairey Gannet AS.1

WN456-459, XA326-334, XA343, XA350-351, XA356, XA359, XA389, XA403, XA434, XA436, XD898, XG784-785, XG787, XG789, XG791-792, XG795-796, XG825-826. 33 aircraft 33 aircraft Fairey Gannet T.2

XA514, XA517, XG888. Conversion from AS.1 XA333

4 aircraft

FEDERAL GERMAN NAVY

Fairev Gannet AS.4

UA+101 to UA+115 (ex. XG833-836, XG839-840, XG843-844, XG846, XG849-850, XG852-853, XG829-830.) 15 aircraft

Fairey Gannet T.5 UA+99 (ex. XG890.)

1 aircraft

INDONESIAN NAVY

Fairey Gannet AS.1 AS-00 (WN355) and one unidentified. 2 aircraft

Fairey Gannet T.2

AS-14 (1) (temporary serial used on the Fairey-owned WN365/G-APYO). 1 aircraft

Fairey Gannet AS.4

AS-01 (XA409), AS-02 (XA398), AS-03 (XA397), AS-04 (XA349), AS-05 to AS-11 and AS-16 (2) built from various components from WN339, WN340, WN367, WN394, WN395, WN404, WN445, XA339, XA348 and XA361. AS-12 (WN429), AS-13 (WN352, and originally AS-15), AS-14 (2) and AS-15 (2) (were new aircraft with c/ns F9512 and F9513), AS-16 (1) (WN372). 17 aircraft Fairey Gannet T.5

LA-17 (XG874) and LA-18 (XA521, and probably originally LA-01).

2 aircraft

it had a Gannet AS.4 on the strength of Heron Flight, and Lee-on-Solent operated at least one Gannet AS.4 (COD) on occasions during the mid-1960s on behalf of Flag Office Naval Air Command (FONAC) and Flag Officer Aircraft Carriers (FOAC) whose headquarters were in the local area.

One final user of the Gannet T.2 was the Empire Test Pilot School at RAE Farnborough. Because of its unique engine and propeller configuration and three seats the Gannet was an ideal subject for the students to fly and at least two aircraft were used from 1955 until around 1962, these being XA515 '241 and XG873

GANNETS FOR EXPORT

The Gannet did enjoy some export success but from the beginning the foreign sales were not anticipated to be high because of the small number of navies which had aircraft carriers. Even so, two customers did not operate carriers but nevertheless bought the Gannet for short-range coastal anti-submarine operations - West Germany and Indonesia. The first customer however, was the Royal Australian Navy, which had acquired a second carrier from the RN, commissioned in October 1955 as HMAS Melbourne, and was shopping around to equip its air group. Since the Gannet AS.4 would not be ready for service for several more years the RAN bought 33 Gannet AS.Is and three T.2s from existing RN stocks during 1955 with the aim of fitting them with the more powerful engine in due course. However, in the event the service replaced them with the Grumman S-2 Tracker instead. The RAN assigned the 'N3-' serial number type prefix to the Gannet but it was never used and the aircraft retained their British serial numbers throughout their Australian service.

849 Squadron 'C' Flight disembarked at RAF North Front, Gibraltar around March 1963. The flight colours of black and white are carried on the spinners and the rear of the auxiliary fins, and the flight letter on the fuselage sides above the jet-pipe. The Gannet AEW.3s include XP199:431-R, XL451:432-R and XP229:433-R, whilst the COD Gannet is XA430:1-R and lacks the flight colours. (MAP)





Having bought the aircraft the RAN sent personnel to the UK so that two squadrons could form and work up before returning to Australia when *HMAS Melbourne* was delivered in 1956. Accordingly, 816 and 817 Squadrons were formed at RNAS Culdrose in August 1955, each with seven Gannet AS.1s initially, then once both the ship and its air group were ready the squadrons embarked in February 1956 for the journey home. On arrival in early May 1956 both squadrons disembarked to RANAS Nowra, NSW, which was to be their home when not embarked.

Of the two units 817 Squadron had the shorter career, disbanding at Nowra on I S August 1958 following several deployments aboard *HMAS Melbourne*. On the other hand 816 Squadron operated the Gannet until it was withdrawn from service in 1967 to be replaced the following year by the Grumman S-21 Tracker.

The first RANtraining unit to receive the Gannet was 724Squadron, the services Operational Training School based at RANAS Nowra. As such it operated a variety of aircraft types to which was added the Gannet AS. I and T.2 in June 1955, but in January 1958 these were passed on to the newly formed 725 Squadron also at Nowra. This Squadron started as a Fleet Requirements Unit operating various types of aircraft, but in May the following year it was redesignated the RAN's Anti-Submarine Warfare Training Squadron. Thereafter it concentrated upon training Gannet crews, a task it continued to perform until it was disbanded on 31 May 1961.

From I June 1961 724 Squadron once added anti-submarine Gannet training to its duties, inheriting 725 Squadron's Gannet AS.1s and T.2s for the purpose. The former were given up in July 1964 when the training of the small number of

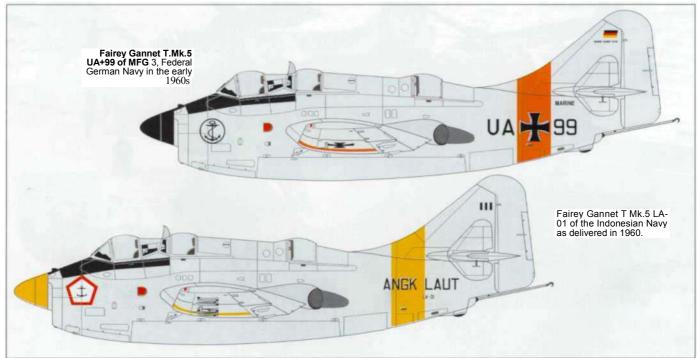
XL455:262-H of 849 Squadron A' Flight waiting to launch from Hermes' port catapult in October 1968 The Gannet's large Fowler-type flaps are evident in this view and are set at the two-thirds position, (author)

observers and aircrew ratings required was transferred to 816 Squadron, but the T.2s continued in use until November 1966 for pilot conversion training, instrument rating checks and deck landing practice

When the RAN withdrew the Gannets from service some were used for ground instructional duties but most of the airframes seem to have been scrapped. Today several survive in Australia as museum exhibits XG888 was returned to the UK, eventually to reappear as a Gannet T.5 for the Royal Navy

The next country to buy the Gannet was the Federal Republic of Germany which, by

Continued on page 29



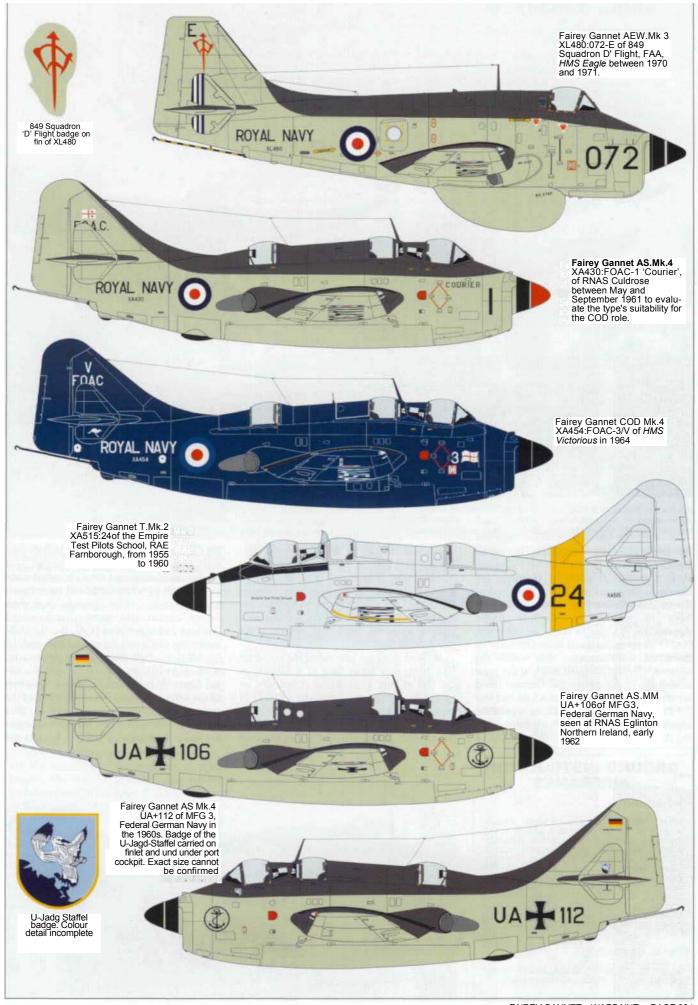


Above: Gannet AEW.3 XL472:044-R of 849 Squadron 'B' Flight with hook down about to catch an arrester wire on board *HMS Ark Royal* in 1978. Below: Two 'B' Flight Gannets XP225:425-C and XP227:427-C run up before take off from *HMS Centaur* in 1964.

The wing-poles were generally kept in place until the aircraft were ready to position on the catapult to prevent damage from the severe turbulence over the flight deck. (author)



PAGE 27 WARPAINT FAIREY GANNET





the late 1950s, was rebuilding its armed forces as a member of the NATO alliance. West Germany's maritime interests lay chiefly in the North and Baltic Seas, and as Soviet and Warsaw Pact submarines would have to transit the shallow Baltic Approaches in order to reach the open sea, NATO planners assigned West Germany an important anti-submarine role within the alliance. Britain supplied much of the main equipment of the embryonic German naval air arm including 15 Gannet AS.4s and one T.5 ordered in 1956. Since time was of the essence the aircraft were drawn from existing Admiralty contracts and following pilot conversion training

at White Waltham during the first half of 1958 operational crew training was carried out with the RN at RNAS Eglinton. To expedite crew training the Gannet T.5 was delivered to Eglinton on 6 March 1958 and the Bundesmarine's Gannet squadron, MFG 1/1 formed there two months later.

With its work-up completed the squadron flew to its new home base of Schleswig at the end of July 1958 where it operated as part of Marinefliegergeschwader 1 (MFG 1) on antisubmarine and anti-shipping duties, as tasked by NATO's Commander Baltic Approaches (COMBALTAP). At the time the Gannets served with MFG 1 aircraft generally used their

construction number as a permanent identity and were identified within their unit by a two-letter and three-figure fuselage code. The Gannets used their Fairey construction number and carried fuselage codes prefixed 'UA', the 'U' indicating the unit's anti-submarine role and the 'A'MFG 1. Individual Gannet AS.4 codes were 'UA+101' to 'UA+115', with the initial figure ' 1' indicating Number 1 Squadron of the wing, whilst the T.5 c/n F9419 had the unusual two-figure code 'UA+99'. The squadron later transferred to Nordholz coming under the control of MFG 3, but appears to

GROUND INSTRUCTION AIRFRAMES

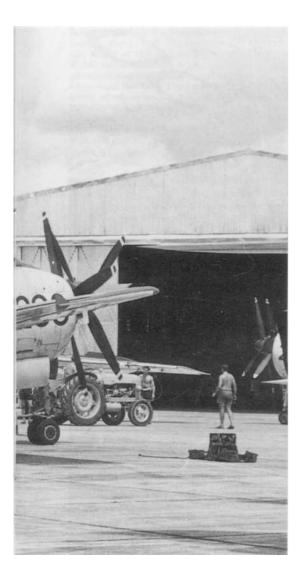
ROYAL NAVY

VR557, WE488, XA454, XA460, XA463, XA510, XA518, XG797, XG881, XL480, A2412 (WN354), A2414 (WN341), A2416 (WN462), A2419 (WN421), A2421 (WN393), A2422 (WN373), A2435 (WN376), A2436 (WN453), A2437 (WN344), A2450 (WN343), A2459 (XA523), A2466 (WN364), A2467 (WN454), A2470 (WN391), A2471 (XA342), A2472 (XA508), A2474 (XG871), A2493 (WN346), A2528 (XA363), A2533 (XA456), A2539 (XG831), A2540 (WN464), A2608 (XA459), A2667 (XP226), A2701 (XL500).

ROYAL AIR FORCE

XL471, XL472, XL481, XL494, XR432, 8601M (XL450), 8610M (XL502), 8754M (XG882).





849 A' Flight ashore during 1966. XL471 was coded 263-V and behind is XL503:260-V. Both carry the red and black flight colours, together with the black and Sky albatross superimposed over the red flight letter on the fin. (APN)

have retained its 'UA' codes rather than adopt the wing's 'UC code.

One aircraft, F9372 UA+II5 was lost, but the remaining Gannets continued in service with the Marineflieger until their task was taken over by helicopters and the Atlantic maritime patrol aircraft. The first Atlantic arrived at Nordholz in December 1965 and the Gannets were phased out from June the following year, the aircraft eventually going to VFW Lemwerder for storage. Switzerland showed some interest in acquiring the aircraft for use as target tugs but because the original purchase contract had prohibited sale of the aircraft to a third party nothing came of this. Eventually most of the Gannets were scrapped but fortunately several did survive to become museum exhibits.

Left: Rather an oddity around mid-1964 was the Headquarters Flight Gannet AEW.3 XL497:411-V which owed its *HMS Victorious* tail code to a replacement fin taken from and ex-'A' Flight aircraft. At this time the aircraft still had the original HF radio with its short aerial wire rigged from the centre decking to the fin tip. (APN) Right: 849 B' Flight was part of the large Fleet Air Arm contingent at the 1966 Farborough air show. Here XL454:331-H is shown flying past with its starboard engine shut down. This particular aircraft has its code number painted farther forward and lower down than usual. (APN)

Another foreign customer who bought the Gannet for short-range operations from shore bases was Indonesia, which ordered 18 Gannet AS.4 s and T.2s, together with ground instruction airframes, from Fairey in January 1959. At the time France had been persuaded by the Netherlands not to sell the Alize to Indonesia because the Dutch foresaw trouble with their former colony, rightly as events were to prove, but on this occasion the UK government saw fit to approve the sale of Gannets to the Indonesian Air Force (AURI).

Fairey bought back 20 surplus Gannet AS.I and two T.2 airframes from the Admiralty to form the basis of the contract and sufficient were given a thorough overhaul and modified up to full AS.4 or T.5 standard as required. In addition airframe sections were collected sufficient for two additional Gannet AS.4s and a T.5. Out of these the two AS.4s were actually assembled, being given the construction numbers F9512 and F9513, but the T.5 was not proceeded with. Two instructional airframes were also supplied, the first of these being the Gannet AS. 1 numbered AS-00 which left for Indonesia by sea in June 1959. The second was possibly the unidentified cocooned Gannet at Birkenhead docks in April 1961 awaiting shipment to Indonesia. Known identities of the operational Gannet AS.4s were AS-01 to AS-16, and LA-17 and LA-18 were the T.2s, but the serial numbers of some machines were altered before their arrival in Indonesia so some uncertainty still exists. Confusion arose partly because some numbers were issued early by the Indonesian Embassy in London and later altered by the AURI, and also because when the Gannets did enter service it was with the Indonesian Navy (AULRI) rather than the Air Force, who seem to have made further changes. Right up to the time the last deliveries were made it appears that official confusion over the exact serial numbers persisted, with some duplications occurring.

The first Indonesian Gannet was completed in October 1959 and test flown at White Waltham where Fairey soon set up the Indonesian training programme. For this the company used three AS.4s, for which the serials AS-14 to AS-16 were assigned, and the T.5 LA-17, but these 'training numbers' tended to be reassigned to fresh aircraft as they arrived at White Waltham leading to some confusion both then and now.

SURVIVING GANNETS					
Serial	Variant	Location and notes			
	AS/T	NARO Fleetlands, Cockpit			
		section, possibly a train-			
		ing aid produced from			
	AS	surplus components.			
-	AS	Dunkeswell. Cockpit section only.			
_	AS	HMAS Nirimba. NSW			
		Australia. Possibly gone,			
		might now be XA331 at			
		Brisbane museum.			
WN411	AS.1	Southampton. Fuselage			
XA331	AS.1	only. Queensland Air Museum			
AA331	A3.1	Brisbane, Australia			
XA334	AS.1	Camden Museum of			
		Aviation, NSW, Australia.			
XA434	AS.1	RAN Air Museum, Nowra			
XA459	AS.6	NSW, Australia.			
XA459 XA460	AS.6 AS.6	Membury North-East Wales			
AA400	A3.0	Institute, Connah's Quay			
XA466	AS.4	FAA Museum store,			
		Yeovilton.			
XA508	T.2	Midland Air Museum,			
VO700	40.4	Baginton.			
XG789	AS.1	Moorabin Air Museum, Victoria, Australia.			
XG797	AS.6	Imperial War Museum,			
70101	710.0	Duxford.			
XG831	AS.6	Cornwall Aero Park,			
		Helston.			
XG882	T.5	Errol. A composite using			
		parts from XA463 and XG889.			
XG883	T.5	Museum of Berkshire			
7,0000	1.0	Aviation, Woodley			
XG888	T.5	RAN Air Museum, Nowra,			
		NSW, Australia.			
XL449	AEW.3	Wycombe Air Park,			
XL450	AEW.3	Booker. Cockpit section. Monchengladbach,			
AL430	AEW.3	Germany.			
XL472	AEW.3	Charlwood.			
XL482	AEW.3	San Antonio, Texas. Now			
		civil registered as			
VI 407	A E\A/ O	N1350X.			
XL497 XL500	AEW.3 AEW.3	HMS Gannet, Prestwick. RNAS Culdrose			
XL500	AEW.3	Sandtoft. Civil registered			
		as G-BMYP. Nominally			
		airworthy.			
XL503	AEW.3	Fleet Air Arm, Museum,			
VDOCC	A E144 O	RNAS Yeovilton.			
XP226	AEW.3	Newark Air Museum,			
XT752	T.5	Winthorpe. Amjet Aircraft Corp.,			
A1102	1.0	Anoka County Airport,			
		Minnesota, USA.			
40.00	404	A			

Armed Forces Museum,

Was 'UA+110'but painted

Jakarta, Indonesia.

as UA+106', Gatow, Germany.

UA+112', Koblenz,

Germany. UA+113¹ Nordholz,

Germany.



AS-00

F9391

F9394

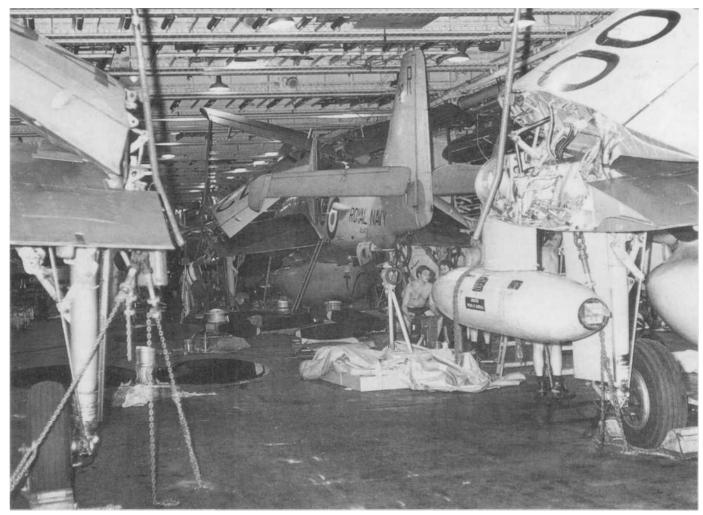
F9395

AS.1

AS.4

AS.4

AS.4



begin with Fairey's own Gannet T.2 WN365 was painted up as 'AL-14\ then as AS-14, which was not a number assigned to the T.5s, but then it was withdrawn for T.5 conversion to reappear in the training programme with the civil registration G-APYO. During crew training at White Waltham AS-16, the original Gannet AS.4 prototype WN372, was written off in a belly landing and later replaced by another aircraft with the same serial number. The damaged hulk of the original AS-16 was eventually sold as scrap in 1961.

As crews completed their training at White Waltham and as sufficient aircraft became

Indonesia in small batches. The contract had stipulated a delivery rate of six aircraft a year but by 1961 tension was increasing in the East Indies and the British government began to have second thoughts about supplying arms to an increasingly belligerent Indonesia. Deliveries slowed and the last two aircraft, AS-15 and the replacement AS-16, did not finally leave Britain until 18 January 1962. They almost never left at all because on 15 January Indonesia had invaded West Irian and clashes soon followed with Dutch forces in the region, but despite awkward questions at home the Gannets were allowed to proceed.

In Indonesian service the Gannets seem

849 Squadron 'B' Flight undergoing maintenance in *HMS Ark Royal's* upper hanger in 1973. The three aircraft of the flight consist of XL500:042-R, XL472:044-R and XL494. (author)

mainly to have carried out coastal patrol and reconnaissance missions, supporting Indonesian forces moving east through the archipelago. The creation of Malaysia in September 1963 prompted Indonesia to move against north Borneo as well and this drew an armed response from Britain, initiating the Confrontation which lasted until 1966. During this period the West ceased all arms trade with Indonesia and as supplies of spares became exhausted the availability of the AULRI's Gannets steadily fell. The Indonesian government then turned to the USSR for new equipment and by 1971 barely a handful of Gannets were left. The last of these was withdrawn not long afterwards and few remained, but one that has is the ground instructional Gannet AS.I AS-00 which is in the Indonesian Armed Forces' Museum in Jakarta-Selantan.



Airborne early warning was pioneered by the US Navy during the latter part of World War 2 in the Pacific Theatre, and when the war ended the USA was the only country to

Gannet AEW.3 XL502:428-C of 849 'B' Flight in 1965. It carries the black and yellow flight colours on the spinners, auxiliary fins and arrester hook, as well as a cartoon bee on the fuselage sides above the jet pipe. The baggage pod below the starboard wing also has the flight colours around its nose.



Aircraft from 849 Headquarters Flight flying in echelon port in 1963. The aircraft are XL473:410-CU, XL497:411-CU and XL482:412-CU, of which XL497 lacks the small squadron badge at the extreme fin tip which was becoming the practice from about that time. The propeller spinners are black which remained the HQ Flight's colour throughout its existence.

have operational AEW aircraft. Their value was self evident, particularly for navies with aircraft carriers from which they could operate, so the RN was not slow to set about acquiring such aircraft. As a temporary measure the RN received Douglas AD-4W Skyraiders from the USA under the Mutual Defense Aid Program, with the first ones arriving in November 1951. Already the Admiralty had approached British aircraft manufacturers about building a comparable British aircraft to operate from existing RN carriers, with virtually the only stipulation being that it was to use the American AN/APS-20 S-band (later re-designated Eband) radar since this was the only suitable airborne radar at the time.

The Skyraider provided the general layout for the new aircraft, with its large ventral radome and an after cabin for two radar operators. Fairey initially looked at putting the radar into the anti-submarine Gannet airframe, but even with the uprated Double Mamba 101 the aircraft would have been under powered and neither could the radar and operators be accommodated in the existing fuselage shape. However, the Gannet was judged to be the most suitable aircraft available at the time so it was decided to initiate a radical redesign programme under the designation Gannet AEW.3, and when the aircraft finally appeared in 1958 it had very little in common with earlier Gannets. It is in fact likely that the project would never have survived had this new aircraft not been called a 'Gannet' because funding would not have been granted for a completely new aircraft type during a period of drastic cuts in defence spending.

Externally the Gannet AEW.3 resembled the basic Gannet with a new fuselage, but looks were deceptive. It was still powered by the Double Mamba but now had the significantly improved ASMD.8 version offering 3,700 shp. This Double Mamba 112 had

Headquarters Flight 849 Squadron seen leaving their base at Brawdy for a new home at Lossiemouth. The date of departure was 19 November 1970 and the formation consisted of three Gannet AEW.3s and two T.5s (Crown copyright)

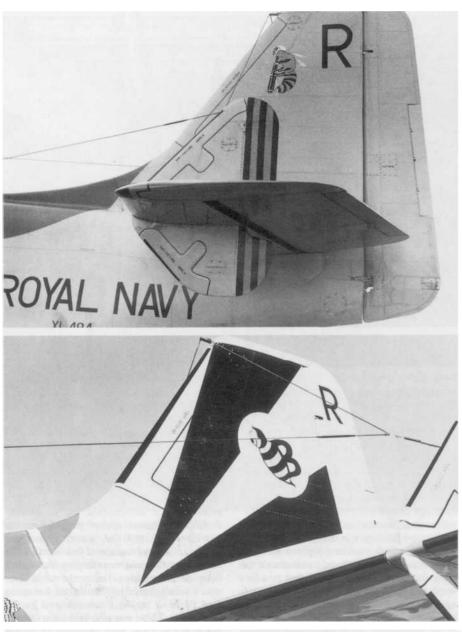


been under development at Bitteswell for several years and successfully test flown fitted to Gannet AS. I WN345 in 1956. The main external difference between this and earlier versions of the engine was its short jet pipes which were so designed that they actually provided a measure of thrust to augment the propellers. Also, the new engine was started by low-pressure air from an external source rather than by a solid fuel cartridge as had been the case with the antisubmarine Gannets.

The new fuselage was designed around the new engine with its short jet pipes ahead of the wings, and an enclosed cabin above the wing trailing edge accommodating two forward-facing observers sitting side by side, with the senior to port. Access to the cabin was by an upward-hinged door each side and in an emergency the doors could be jettisoned by a compressed air charge. Each observer had an identical radar display with individual controls and shared the main radar controls mounted on a central consul-The AN/APS-20F radar was carried in the lower fuselage below the wings with the customary large ventral radome, and was mounted on a frame which could be lowered independent of the antennae for access or removal. Because of the radome the undercarriage had a lengthened stroke to give adequate ground clearance, and the vertical tail surfaces were enlarged to compensate for the deeper fuselage.

The aircraft was also fitted with an IFF interrogator slaved to the main radar aerial, and AN/ART-28 Bellhop, a data link transmitting the radar picture to a surface station. The AN/APS-20F's picture was ground stabilized about north by means of drift and ground speed information fed in from a Doppler navigation system mounted in the rear fuselage, and the aircraft's compass heading. The advantage of this was that the radar screens could then display true rather than relative motion. Below the cabin floor was a small stores bay sufficient for up to four flares or smoke floats released by the observers. There was also provision for one pylon below each wing plumbed to take a 100 gallon drop tank, but alternatively each pylon could carry a baggage pod, an airportable low pressure air starter for use on deployments, or a light series stores carrier with a further four flares or markers. The Gannet AEW.3 was also fitted with electrical anti-icing mats along all wing and tail leading edges, as well as around the engine intake, but in service this proved unreliable and was eventually inhibited.





Tail marking styles. Left: The original style of bee emblem used by 'B' Flight is shown here on XL494. The bees were largely hand painted so differed slightly in detail one from the other. This view also shows the revised High Frequency radio aerial fitted to Gannet AEW.3s during the mid-1960s, with the longer wire array being rigged to both auxiliary fins and the main fin tip. Lower left: A close-up of the tail of XL450 showing the pattern of the colourful flight markings. The final pattern adopted during 1977 had the shapes of the black and yellow wedges slightly altered so that the front edge of the coloured panel followed the line of the fin leading edge

A single aerodynamic prototype Gannet AEW.3 was built to test the airframe, aircraft systems and engine, but it carried no radar. It differed slightly from the production aircraft most noticeably in having a tail bumper, but carrier trials showed this to be unnecessary so it was removed. The prototype also had a short arrester hook, a feature it shared with the earliest production aircraft, but eventually a longer hook became standard. Like all subsequent aircraft XJ440 was built at Hayes, and on 20 August 1958 it made its first flight from RAF Northolt recovering at White Waltham to begin company testing. In September it was demonstrated at the Farnborough air show and by the autumn had moved to Boscombe Down to begin service evaluation, which included deck-landing trials aboard HMS Centaur that November. The first production Gannet AEW.3 XL449 first flew on 2 December 1958 so once XJ440 had completed its handling trials it became a Double Mamba test bed with Bristol Siddeley. It eventually crashed on 26 April 1960 whilst

B' Flight Gannet AEW.3 XL500:042-R showing the revised tail emblem introduced in the autumn of 1973. To begin with the cartoon bee was painted directly onto the Sky fin tip in black and yellow with white eyes. Below the bee on this aircraft was a red dragon with a crown above it, identifying this aircraft as the 'Red Dragon' Gannet used in October 1972 to fly Prince Charles on a series of AEW familiarization sorties. (G.Mangion)





Above: XL479:760-BY was one of 849 Headquarters Flight's aircraft in 1970 and is seen here staging through RNAS Lossiemouth in September of that year It was standard practice to start up one engine with an external starter, as is being done to the aircraft in the background, and then to use the slipstream to windmill up the second engine. This conserved engine life, since one criterion governing the time between engine overhauls was the number of external starts, so such starts were alternated between the two engines, (author) Right: During 1975 the B' Flight tail markings were revised to the style shown here on XL450:042-R. On the rear fuselage sides is a large squadron badge belonging to RVAW-120 acquired during a period when the flight was disembarked at NAS Norfolk, Virginia early in 1976.

landing at Filton following one such k flight, and was replaced by XL471.

Early production Gannet AEW.3s continued service testing with the A&AEE and Fairey, and in May 1959 XL449 and XL451 spent a period aboard HMS Victorious for flight deck handling trials. Once the type had been cleared for service use 700G Flight formed at RNAS Culdrose on 17 August 1959 as the Gannet AEW.3 Intensive Flight Trials Unit, eventually receiving four aircraft of which XL453 was lost in a crash on 25 January 1960. On completion of these trials, and having flown some 1,855 hours, 700G Flight was re-designated 849 Squadron 'A'Flight on 1 February 1960. At the same time as these operational trials were under way other aircraft were carrying out various equipment tests which were to continue for several more years. These included XL449 which was used for cabin door and drop tank jettison trials and for testing the anti-icing equipment, XL.450 which undertook tropical trials in Libya during July 1959 and XL452 which was used tor anti-icing and radio trials at Boscombe

Showing how slow you can fly when you really try Gannet AEW 3 XL500 flying from Culdrose on loan to Dowty Rotol in 1984. It retains the toned down markings and 'LM' tailcode in use at the time 849 Headquaters Flight disbanded, (author)





Gannet AEW.3 XL474:262-H during 849 'A' Flight's final cruise in 1970. The finish remains as before with the addition of bands of the flight's colours to the arrester hook. Evident in this view is the frangible implosion panel immediately behind the pilot's cockpit, with a white warning panel on it. This was part of a modification giving the pilot's seat an automatic underwater escape capability. (G.Mangion)

Down. Tests were also carried out to assess the feasibility of using the Gannet AEW.3 as a long-range, anti-submarine hunter-killer. The AN/APS-20 radar had already been used in this role by the USN and during 1963 XL452 was flown carrying an antisubmarine homing torpedo on each wing pylon, but nothing came of this.

849 SQUADRON

The Royal Navy's AEW Skyraiders had been operated by 849 Squadron which maintained a Headquarters Flight at Culdrose which carried out all aspects of AEW training and trials as well as deploying operational flights to the various aircraft carriers as necessary. To enable pilot conversion to begin a number of Gannet AS.4s and T.5s were delivered to the squadron from September 1959, with the first Gannet AEW.3s arriving in February the following year. By 15 December 1960 sufficient aircraft were available for 849 Squadron to disband its last Skyraider flight. The first Gannets re-equipped 849 'A' Flight destined for HMS Ark Royal, quickly followed by 849 HQ Flight, and the squadron's other flights then reformed as they were required.

The policy was to keep the squadron headquarters ashore and for there to be four seagoing flights, one for each of the RN's carriers in commission. These flights of three aircraft, later increased to four, generally formed as they were required and disbanded when their parent ship went in to refit for a lengthy period, but flights were also moved around between the carriers. The squadron headquarters moved to RNAS Brawdy on 15 December 1964 to make room at Culdrose for the ever-growing number of helicopters, then on 19 November 1970 moved to RNAS Lossiemouth prior to the transfer of Brawdy to the RAF. When Lossiemouth also transfer-



red to the RAF in September 1972 the squadron remained in residence, consisting now of 849 HQ and B' Flights only, and eventually the whole squadron was disbanded on 15 December 1978 following the paying off of *HMS Ark Royal*.

Besides operating the Gannet AEW.3 849 HQ Flight also used several Gannet T.5s for pilot training and instrument rating checks. It also operated a number of Gannet AS.4 (COD) and AS.6 aircraft for general crew training and communications work, and also to act as targets and fighters on the early part of the AEW Operational Flying Training courses run by the squadron. Also, since 849 Squadron was the sole user of the Gannet by the late 1960s it became responsible for the storage of most of the surviving aircraft. In consequence airframes tended to move between the flights and storage in order to even out their flying hours, and so the number and variety of Gannets used by HQ Flight varied as needs dictated. It also used various redundant airframes for training its own maintenance ratings.

The prime role of the Gannet AEW.3 was airborne early warning, providing long range information on air contacts beyond the parent carrier's radar envelope, but the aircraft was also able to act as an airborne adjunct to the ship's operations and air direction rooms. Not only did the observers report air contacts back to the ship but they could also control the combat air patrol

(CAP) fighters and direct the interception of targets. A secondary role was that of surface search, plotting the surface picture and reporting back shipping activity, then controlling probe aircraft to investigate specific ships and, if required, follow-up strikes on designated targets. Because of its good radar and communications fit, together with its long endurance and two observers, the Gannet was also used in search and rescue operations as the Scene of Search Commander, able to conduct its own search whilst monitoring or controlling other search aircraft. For SAR operations the Gannet could carry a container on each wing pylon for Type G 'Lindholm' rescue equipment which allowed it to drop inflatable dinghies to survivors.

EQUIPMENT UPDATES

The front-line use of the anti-submarine Gannets had been relatively short but from the beginning the Gannet AEW.3 was planned to remain operational at least until the introduction of the RN's new super-carriers in the late 1960s. Accordingly from the early 1960s aircraft began gradually to be withdrawn from use and returned to Fairey (then Westland) for a complete overhaul to ensure that sufficient Gannet AEW.3s were always available for front-line service. Initially the aircraft were flown to White Waltham where they were dismantled and the parts transported back to the Hayes factory by road. Engines and electronic equipment were handled separately and went elsewhere for specialist attention. At Hayes all the major airframe sub-assemblies were stripped, inspected and repaired as necessary, and all airframe electrical looms replaced. The airframes were then reassembled at White Waltham and re-delivered to 849 Squadron. This routine had not long been running when Fairey Aviation was taken over by Westland Helicopters Ltd and from 1964 the aircraft were instead flown to RNAS Yeovilton where Westland maintained its Ilchester facility.



Gannet AEW.3 XP226:044-R of 849 'B' Flight landing at RAF Luqa in late 1970 wearing the markings adopted by the flight when it reformed for serice on HMS Ark Royal at the beginning of that year. It is shown carrying a portable Palouste low pressure air starter below the port wing and a 100-gallon drop tank below the starboard. (G.Mangion)

The Gannets were now dismantled there with the fuselage and stub wing assembly still being transported by road back to Haves, but the major airframe components were distributed to other locations within the Westland group for refurbishment. Following reassembly at Ilchester, though not necessarily using the original airframe components, the refurbished aircraft were test flown at Yeovilton and redelivered to 849 Squadron. When the Hayes factory was closed its Gannet refurbishment work was transferred to Westland's facility at Weston-Super-Mare. and it was from here that XL494, the last refurbished Gannet AEW.3, was delivered in 1975.

During its service life the external appearance of the Gannet changed little, being limited to a slightly lengthened arrester hook, which was adopted very early on. and a lengthened HF radio aerial wire which necessitated the addition of a supporting mast behind the cockpit. Internally however, there were several significant changes made. From the latter half of the 1960s the pilot's fixed seat began to be replaced with a seat equippen with a compressed air system to assist in his release from the aircraft in the event of a ditching. The underwater assister first jettisoned the canopy at a pre-set depth of 15 feet then at 25 feet released the pilot's harness and boosted him clear of the aircraft. As part of this modification the transparencies behind the canopy were converted to implosion panels so that the cockpit would flood more rapidly. The

Right: One of HMS Ark Royals Gannet AEW.3s catching the No 1 wire in a perfect landing during one of the carriers last cruises to the Mediterranean Below: Gannet AEW 3 XL481:761-LM of 849 Headquarters Flight in October 1974 during one of the squadron's periodic exchange visits to the French Navy s 4 Flotille at Lann-Bihoue It can be seen in this view how the underwing drop tanks would adversely affect the radar performance on either beam, and for this reason two tanks were not normally carried unless absolutely necessary, (author)

other significant change made to the Gannet was to its AN/APS-20F radar.

The radar was subject to a number of minor updates during its time in service but major modifications were introduced around 1970 resulting in the AN/APS-20F(I) designation. This "Improved radar had two main features which had been tested on XL5O2 at the Royal Radar Establishment. Pershore from 1968 and consisted of a new radar amplifier and an airborne moving target indicator (AMT1). The former was a means of improving the radar's ability to display-weak target returns whilst the latter allowed the operators to track airborne targets through areas of radar clutter and land returns which otherwise would have masked them. Also as part of this improved radar system an updated IFF (Identification Friend or Foe) interrogator was fitted capable of displaying the exact If I codes being transmitted by a contact

One further modification planned for the Grand \1 W.3 was the installation of passive electronic support measures (ESM) equipment, but this was abandoned alter the withdrawal of the RN's fixed-wing carriers began. The equipment was to have included an omni-directional 'I' band receive r to intercept fire control radars and a directional receiver for lower frequency search radars.

The latter could be trained by the observers in order to obtain a bearing, and both provided the crew with audio signals to assist m radar identification. The installation was initially fitted to XR433. mounted on the rear decking below a thimble radome, and later XL456 continued with the trials and then flew with $S4^{\rm t}$) Squadron until it crashed in September 1974

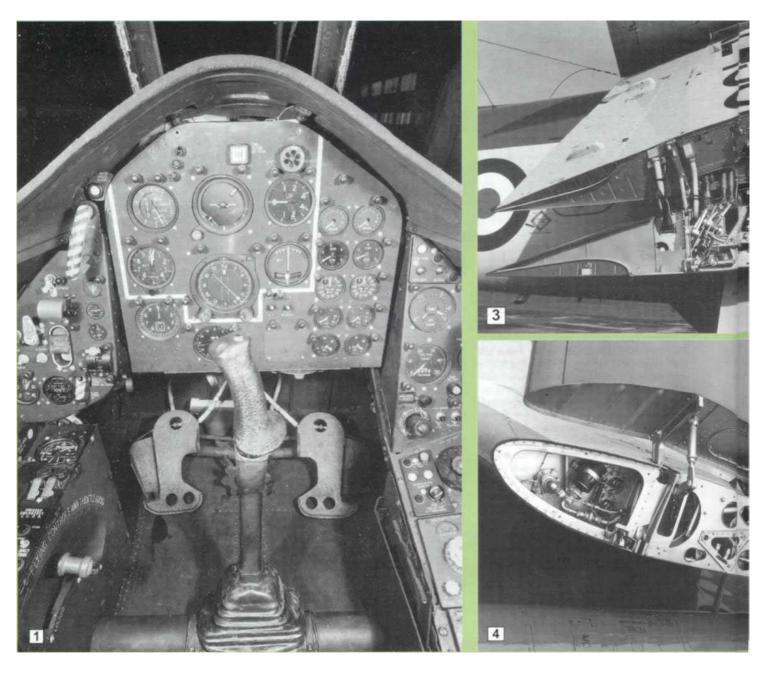
THE END OF THE LINE

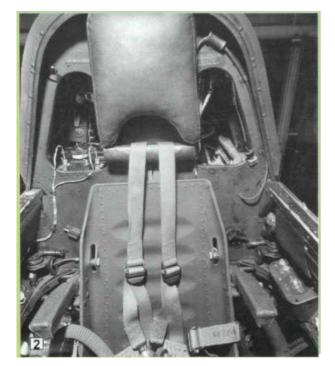
The withdrawal of the Royal Navy's strike and their carriers fixed-wing squadrons meant that Britain would lose its \i \y capability as well, so to prevent this happening it was decided to transfer the role to the RAF. During the latter part ol the 1960s 849 Squadron carried out an increasing number of exercises with No. 11 Group. RAF, which included detachments to east coast tighter stations, and successfully demonstrated that land-based AI W could be integrated into the existing UK Air Defence Region. Work was therefore initiated to equip the RAF with its own AEW aircraft. However since it would take some

Continued on page 41

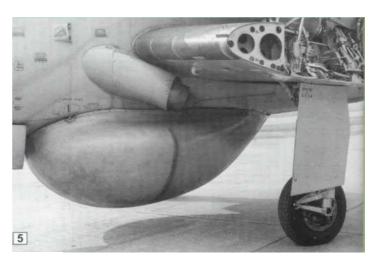


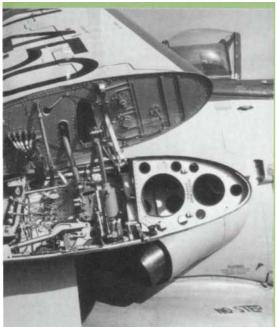


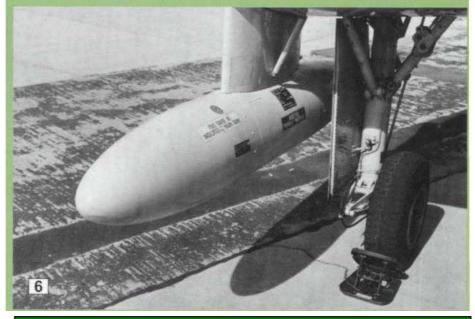




1. Gannet instrument panel. Blind Flying instruments centre, throttles and undercarriage lever left, and engine instruments to the right. 2. The pilot's seat looking to the rear. 3. Detail of the wing folding arrangement for the fold nearest the fuselage. 4. The details of the outer wing fold. This shows the UHF upper aerial one of several fitted to this variant. 5. The AEW.3 radome in relation to the left main undercarriage, jet pipe and wing fold.

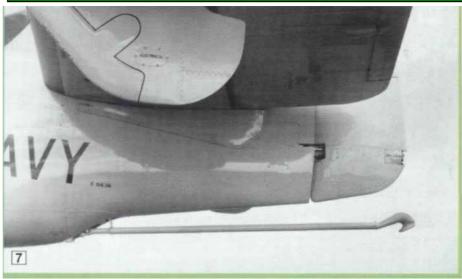




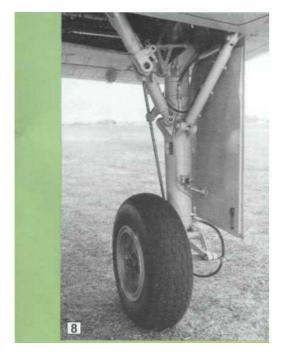


Fairey Gannet AEW.3 in detail

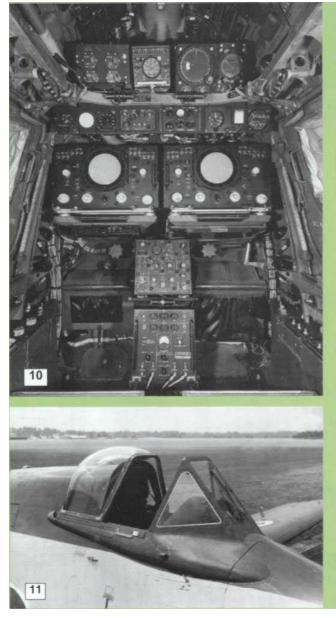
Fairey Aviation photographs from the files of lan Huntley

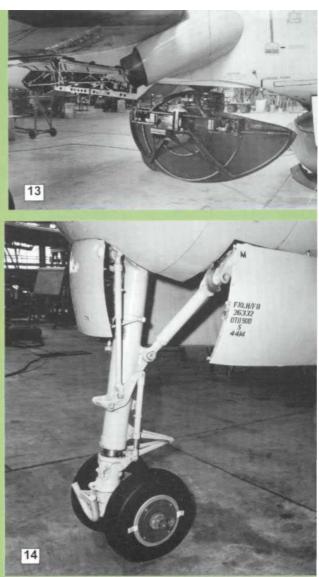


6. The Gannet's long range fuel tank fitted to the starboard wing. Note the small strut that connects to the wing. This view also shows main undercarriage detail. 7. The arrester hook and taiplane underside. 8. The inner side of the port main undercarriage leg and wheel well cover. 9 Crew entrance for the observer/radar operators. The doors were



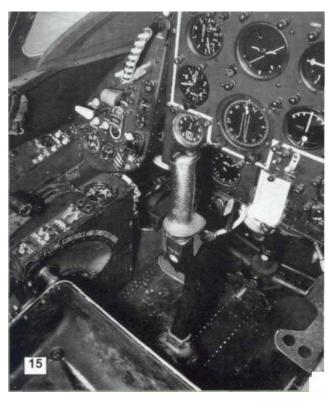






10 The observers station in the rear cabin Both radar consoles are similar though operated in different functions operationally. 11. The pilot's cockpit exterior showing th bulge that extends the length of the whole section. 12. The rear of the observers cabin with the seats removed had a number of instruments connected to both the pilot's and observers' operations 13. The AEW.3's radome without the external cover showing the 'D shaped scanner. 14. Nose undercarriage leg Note the towing hook on the lower end. 15. Left hand side of the cockpit with control column and throttles.





PAGE 39 FAIREY GANNET WARPAINT



GANNET PICTURE PAGE

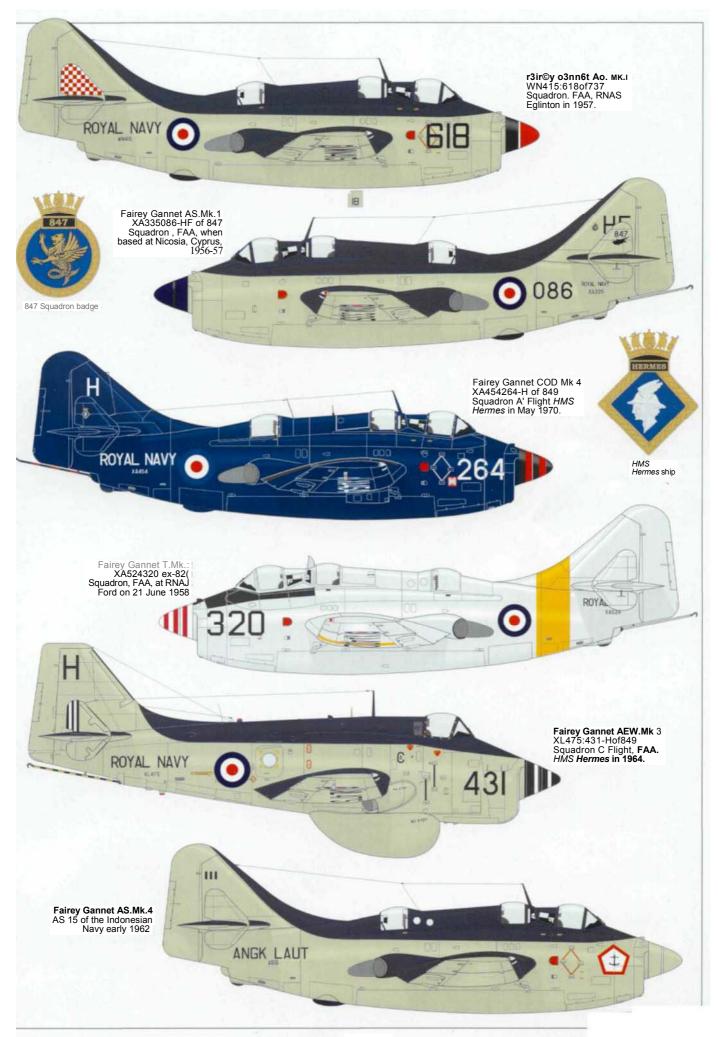
Above: XL500:042-R of 849 BFlight at full power about to launch **from** *HMS Ark Royal* in June 1973. It carried the standard flight finish for the time, with the crew names marked in black above the rear part of the nose code. Right: Gannet AEW.3 XL476:763-LM of 849 HQ Flight during the early 1970s, seen at one of the Biggin Hill air fairs of the period. Apart from red and blue national insignia this shows the standard colour and markings used until the Gannet was declared obsolete. (APN)





Left: Gannet AEW 3 XL498:425-V of 849 B' Flight seen with the bridle attached ready for launch from *HMS Victorious*, (via author) Below: 849 B Flight Gannet AEW.3 XL494:042-R in October 1970 showing the initial version of the flight's tail emblem. The aircraft carries a drop tank below the port wing only, which was common practice in order to leave one half of the radar picture free from attenuation caused by the blanking effect of the tank. It also has the munitions bay aft of the wing trailing edge open in which markers and flares could be carried (author)







Continued from page 36

it would take some considerable time for such an aircraft to be ready for service an interim AEW aircraft was also needed and an AEW conversion of the Shackleton MR.2 was chosen for the purpose. Conversion work was necessarily slow because the Shackleton's AEW equipment was furnished by the RN which still needed to maintain 849 Squadron as an operational unit. Gannet AEW.3s were therefore gradually withdrawn once they were no longer required, to be robbed of their AEW system and the airframes either stored or scrapped. RAF navigators began their training on 849 Squadron and eventually the RAF was able to form No. 8 Squadron at RAF Kinloss on 1 January 1972, equipped with enough Shackleton AHW.2s and RN Observers to begin training its own crews.

With the disbandment of 849 Squadron in 1978 most of the remaining radars and associated equipment were transferred to No. 8 Squadron and the Gannets themselves disposed of, either by being scrapped or distributed to various airfields as ground training airframes. However, two airworthy Gannet AEW.3s and two T.5s went to RNAS Culdrose in November 1978 for storage pending a decision about their future, with one suggestion being that one of each be kept airworthy for the Fleet Air Arm Historic Aircraft Flight. The AEW.3s were still in storage when Argentina invaded the Falkland Islands in 1982 and serious thought was given to the feasibility of using them to provide AEW cover for the RN Task Force sent to retake the islands. However, it soon became apparent that there was no way the aircraft could contribute to the operation from such land bases as were available to Britain. Accordingly MoD attention turned instead to procuring an AEW version of the Sea King to till what belatedly had to be acknowledged was a serious gap in Britain's maritime defences, a weakness which was to cost Britain dear during the subsequent fighting.

It was inevitable that with the number of anti-submarine Gannets built many found their way to training establishments following their withdrawal from active service. Because the Gannet was a modern aircraft with radar and a turbo-prop engine it was well suited to the training of the various aircraft engineering trades, so from mid-1956 surplus aircraft began to be delivered to the RN Air Engineering School at Arbroath. Other establishments to receive Gannets were the RN Air Electrical School at Worthy Down, later Lee-on-Solent, and Bramcote where Naval Air Mechanics were trained up until 1958. Some airframes were also held at St Merryn, Yeovilton and Culdrose for local training courses, as well as at Abbotsinch and Donibristle where many of the anti-submarine Gannets were stored after withdrawal from service, prior to being broken up or otherwise disposed of. One further recipient of several Gannets was the RN Engineering College, Manadon, where naval Engineer Officers were trained.

Besides being used for the training of maintenance personnel several anti-submarine Gannets were used by the RN School of Aircraft Handling at Culdrose from 1963 until about 1980, and the AEW.3 XL500 from October 1980-1983. Having finished their useful service here the airframes were generally used for fire-fighting training either at Culdrose or nearby Predannack, or sold to private buyers. Some aircraft did survive for a time as gate guards at various establishments, including XG882 at Lossiemouth, but considering the numbers built few anti-submarine Gannets remain today. Apart from the handful remaining in the UK however, there is at least one in Indonesia and several in Germany and Australia, although none is airworthy.

By comparison the Gannet AEW.3 has

Gannet AEW.3 N1350X (formerly XL482) leaves Culdrose on its delivery flight to the USA for use by Hamilton Standard in February 1982. All markings on the rear fuselage were painted out and the emblem on the tail appears to be, appropriately, a pterodactyl.

fared better. From 1978 at least two were used as training aids for engineers, XL472 at Boscombe Down and XP226 at Lee-on-Solent, whilst for many years several were used as crash rescue and lire-fighting trainers at various airfields, or as battle-damage repair trainers. Others became gate guards including XL497 at the appropriately named *I IMS Gannet*, Prestwick, and some eventually found their way to various museums, including XL5O3 which went to the Fleet Air Arm Museum.

Of the two Gannet AEW.3s stored at Culdrose XL500 was loaned to Dowty Rotol from 1983 to 1984 for propeller research work at Culdrose, on completion of which it went to Lee-on-Solcnt for storage. It was eventually purchased by 849 Squadron and put on permanent display at Culdrose. The other aircraft was XL482 which was sold and flown to San Antonio. Texas in February 1982, for use by Hamilton Standard in research work on contra-rotating propellers. The last airworthy Gannet AEW.3 in Britain was XL502 which by 1987 had been successfully restored at Carlisle Airport and with the civil registration G-BMYP toured the airshow circuit until its Certificate of Airworthiness expired in September 1989. Following a period in storage it Hew to its new home at Sandtoft, Lincolnshire on 25 February 1995 with plans to continue using it for display flying subject to CAA clearance.

FAIREY GANNET KITS and DECALS

FAIREY GANNET KITS and DECALS						
Scale 1:144 1:72 1:72 1:72	Gannet AEW.3	Frog	Reference PJW16 AM 145 4105	Remarks Vacuform with metal parts Original kit Vacuform kit		
1:72		Aeroclub		Accessory kit for original Frog model Resin model		
1:72 1:48	Gannet AS.1/6 Gannet AS. 1	Model Art Dynavector	MA7218	796 Sqdn/831 Sqdn decals Vacuform with metal parts		



Top: In April 1970 the A" Flight COD Gannet was XA454264-H Whilst the spinners were in the flight colours of black and red, the auxiliary fins arrester hook and underwing mail pods had only the red applied to their usual blue-grey colour. Crew names are painted high on the port forward fuselage above the code. When the improved HF radio was fitted to this version of the Gannet an extra supporting mast was necessary ahead of the rear canopy to keep the wire clear of the cockpit opening (author)



Above: The 849 D' Flight Gannet AEW.3 XR432:073-E visiting RAF Leuchars in July 1970. The red mah-jong Dragon is evident on the sides of the fin. and the nose of the drop tank is plain blue. Visible on this photograph are the open storesbay doors beneath the fuselage roundel, the aircraft carrying marine markers during the daytime and flares at night (author) Below: Gannet AEW 3 XL472044-R over Virginia in April 1976 The national insignia had been toned down by that time but on the Sky fuselage of the Gannet quite the reverse effect was achieved from that intended - the dark roundel compromised the camouflage more than the original pattern roundel had done. Crew names were marked in white above the observer's doors and below the starboard side of the cockpit.(author)



Fairey Gannet Specification

Power plant: One Armstrong Siddeley ASMD.1 Double Mamba 100 turbo-prop engine

ASMD.1 Double Mamba 100 turbo-prop engine rated at 2,950 shp.

Performance: Max speed 310 mph (499 I at sea level Range 600 naut miles

Endurance 5 hrs at 150 mph at sea level Service ceiling 25.000 ft (7.620 m).

Weight: Empty 15,069 lb (6,835 kg). Loaded 19.600 1b (8,890 kg).

Dimensions: Span 54 ft 4 in (16.56 m).

Length 43 ft (13.11 m) Height with wings spread 13 ft 8.5 in (4.18 m). Wing area 483 sq ft (44.9 sq m).

Armament: Internal Various combinations of up to 2 x 1000 lb or 4 x 500 lb bombs, 2 x 18 in (45.8 cm) torpedoes, 1 x 2000 lb or 2 x 1000 lb mines and 6 x depth charges Flares, marine markers, smoke floats and sono-buoys could markers, smoke floats and sono-buoys could

also be can
External Four rails below each wing to carry a
total of 24 x 3 in (7.6 cm) rockets or 16 x 5 in
(12.7 cm) rockets. 8 x Glowworm rocket flares
2 x 100 imp.gal. drop tanks.

One ASMD.1 Double Mamba Power plant: 100 turbo-prop engine rated at 2,950 shp. Performance: As for AS.1 Dimensions: As for AS 1.

GANNET AEW.3
Power plant: One Armstrong Siddeley ASMD.8 Double Mamba 112 turbo-prop engine rated at 3.700 shp. Each unit rated at 1.850 rated at 3.700 shp. Each unit rated at 1,850 shp Fuel capacity: Internal 613 imp.gal. External 2 x 100 imp.gal drop tanks Performance: Max speed 308 mph. Single engine cruise speed 145 mph at sea level. Deck landing datum speed 102 mph. Range 700 naut.miles. Endurance 5 hrs at 145 mph at 3.000 ft. Service ceiling 25.000 ft. Weight: Loaded 26,000 lb Dimensions: Span 54 ft 7 in Length 43 ft 11 in Height with wings spread or folded 16 ft 9 in. Stores: Internal. 4 x marine markers or 4 x 4.5 in (11.5 cm) flares. External. Each wing pylon could carry 1 x 100 imp.gal. drop tank, 1 x Type G Air Sea Rescue Dinghy container, 1 x low pressure air starter unit or 1 x baggage pod Alternatively each pylon could be fitted with a Light Series Stores Carrier for the carriage of up to 4 x flares or smoke floats. or smoke floats.

GANNET AS.4

Power plant: One Armstrong Siddeley ASMD 3 Double Mamba 101 turbo-prop engine

ASMD 3 Double Mamba 101 turbo-prop engine rated at 3,035 shp.

Performance: Max speed 299 mph (482 km/h)
Single-engine cruise speed 150 mph (241 km/h) at sea level. Range 575 naut. miles.
Endurance 4.9 hr at 150 mph level Service ceiling 25.000 ft (7,620 m). Weight: Empty 14,069 lb (6.382 kg). Loaded 23,446 lb (10,63f: 1 Dimensions: As for AS. 1. Armament; As for AS, 1

GANNET T.5

Power plant: One ASMD.3 Double Mamba 101 turbo-prop engine rated at 3.035 shp. Performance: As for AS.4 Dimensions: As for AS.4.

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